

Directions issued by the Gas and Electricity Markets Authority (the Authority) to National Grid Electricity Transmission plc (NGET) in relation to the Electricity Balancing Significant Code Review (EBSCR)

On 1 August 2012 the Authority published notice pursuant to Standard Licence Condition C3 (SLC C3) of the transmission licence granted to National Grid Electricity Transmission plc (NGET) under section 6(1)(b) of the Electricity Act 1989 and paragraph 5.1 of Section F of the Balancing and Settlement Code (BSC) that it was commencing a Significant Code Review (SCR), setting out the scope of the SCR and the reasons why it considered it to be appropriate.

On 15 May 2014 the Authority published its conclusions on the EBSCR in accordance with paragraph 4C(a) of SLC C3 and paragraph 5.3.1 of the BSC (the EBSCR Final Policy Decision document)¹. In that document the Authority indicated that it was issuing directions to NGET in relation to the EBSCR in respect of the raising of a BSC Modification Proposal to modify the cash-out arrangements.

In accordance with paragraph 4C(a) of SLC C3 and paragraph 5.3.1 of the BSC the Authority hereby directs NGET to raise two code modification proposals in the terms and for the reasons set out in the two Annexes hereto (the directions). The Authority directs that NGET raise the code modification proposals in time for the June 2014 BSC Panel meeting.

The directions², together with the EBSCR Final Policy Decision document, constitute notice pursuant to section 49A (Reasons for decisions) of the Electricity Act 1989.

Emma Kelso

Acting Partner, Wholesale Markets

Signed on behalf of the Authority and authorised for that purpose by the Authority

15 May 2014

¹ Further background to the EBSCR can be found in the EBSCR Final Policy Decision.

² Unless the context otherwise requires, words or expressions in these directions have the meaning ascribed to them in the BSC.

Annex 1

The directions (number 1 of 2)

Reasons for the directions

- 1) The reasons for the directions are set out in the EBSCR Final Policy Decision (FPD) document and should be read in that context.
- 2) In particular, the Authority considers for the reasons set out in Chapter 1 and the sections on 'More marginal main cash-out price' in Chapters 2 and 3 of the EBSCR FPD document that proposals should be developed to make cash-out prices more marginal, specifically, we consider it is important for the Price Average Reference volume as defined in the BSC (PAR volume) to be lowered to 250MWh by early winter 2014/15 for the reasons set out in the cover letter that accompanies these directions. This is in order to allow the introduction of more marginal cash-out prices in phases, and ensure stronger signals to balance ahead of possible tight margins in winter 2014/15.

Terms of the directions

- 3) The Authority hereby directs that by the June 2014 BSC Panel meeting NGET shall raise a proposal (the Proposal) to modify the BSC in accordance with the terms specified below, and shall not withdraw such Proposal unless it has first obtained the Authority's consent to do so.
- 4) Consistent with the reasons for the directions specified in the EBSCR FPD document, the terms are intended to enable NGET and industry to bring forward relevant proposals to modify the BSC under the Proposal with a view to addressing the issues identified.

Issues

- 5) The issues that are resolved by the introduction of more marginal pricing can be found in Chapter 1 and the sections on 'More marginal main cash-out price' in Chapters 2 and 3 of the EBSCR FPD document.
- 6) These issues relate to the furtherance of the Applicable BSC Objectives, as provided at paragraph 3 of SLC C3.

Terms

- 7) The Proposal shall set out proposals to reduce the PAR volume to 250MWh with a strong preference for this to be implemented by early winter 2014/15.

Miscellaneous Terms

- 8) The Proposal shall make clear that the specific proposals put forward by NGET pursuant to this direction are intended to facilitate and not preclude (a) any further consideration of the relevant issues; and / or (b) development of the Proposal under the BSC Modification Process so that it addresses the issues identified above in a way that better achieves the purposes and objectives of the Proposal as set out in these directions.
- 9) In addition to the Proposal NGET shall raise any such consequential proposals for modification to the BSC or other industry codes, as are required for the purpose of giving effect to the proposals specified above.
- 10) Modification proposals developed pursuant to these directions shall serve the EBSCR objectives and relate to the specific issues the EBSCR seeks to address.

Annex 2

The directions (number 2 of 2)

Reasons for the directions

- 1) The reasons for the directions are set out in the EBSCR Final Policy Decision (FPD) document and should be read in that context.
- 2) The electricity balancing arrangements and imbalance prices ("Cash-out") in particular provide incentives for generators and suppliers to balance and meet demand when the system is tight, and are critical in delivering secure electricity supplies.
- 3) In Project Discovery (2010), we expressed concern that cash-out prices are currently dampened and inaccurate, therefore hampering security of supply and negatively affecting balancing efficiency.
- 4) A number of factors currently dampen or negatively affect cash-out prices:
 - a) Prices are calculated using an average of the top 500MWh of System Operator (SO) actions to balance the system, rather than the marginal action
 - b) Prices do not include the costs to consumers of involuntary demand disconnections (blackouts) and voltage reduction (brownouts)
 - c) The way reserve capacity is costed into cash-out does not necessarily correspond with tight margins
 - d) The currently dual cash-out system (the Main Price and Reverse Price) create unnecessary balancing costs
- 5) In light of the changing power system with a growing share of intermittent generation, flexibility will become more important for security of supply. We are concerned that dampened cash-out prices result in the market not sufficiently valuing flexibility (the ability to ramp generation or demand up or down quickly in response to changing market conditions), therefore providing insufficient incentives for market participants to provide flexible capacity to meet demand.
- 6) The Authority considers for the reasons set out in the cover letter that accompanies these directions, that it is very important for the timelines described to be followed

as far as reasonably practicable in order to ensure complementary, coordinated and timely delivery of market reforms.

Terms of the directions

- 7) The Authority hereby directs that by the June 2014 BSC Panel meeting NGET shall raise a proposal (the Proposal) to modify the BSC in accordance with the terms specified below, and shall not withdraw such Proposal unless it has first obtained the Authority's consent to do so.
- 8) Consistent with the reasons for the directions specified in the EBSCR FPD document, the terms are intended to enable NGET and industry to bring forward relevant proposals to modify the BSC under the Proposal with a view to addressing the respective issues identified under each relevant heading.

More marginal main cash-out price

Issues

- 9) The issues that are to be resolved by the introduction of more marginal pricing can be found in Chapter 1 and the sections on 'More marginal main cash-out price' in Chapters 2 and 3 of the EBSCR FPD document.
- 10) These issues relate to the furtherance of the Applicable BSC Objectives, as provided at paragraph 3 of SLC C3.

Terms

- 11) The Proposal shall set out proposals to reduce the PAR volume in phases to allow parties to adjust to the new arrangements as follows:
 - a) reduce the PAR volume to PAR50 and Replacement Price Average Reference Volume as defined in the BSC (RPAR Volume) to RPAR1, with a strong preference for this to be achieved by early winter 2015/16;
 - b) reduce the PAR volume to PAR1, with a strong preference for this to be achieved by early winter 2018/19.
- 12) Industry should consider whether indicative values for these new PAR volumes may be published ahead of implementation to assist parties to adjust to the new arrangements.

Including a cost for Demand Control actions in cash-out prices

Issues

- 13) The issues that are to be resolved by attributing a cost to Demand Control actions can be found in Chapter 1 and the sections on 'Including a cost for Demand Control actions in cash-out prices' in Chapters 2 and 3 of the EBSCR FPD document.
- 14) These issues relate to the furtherance of the Applicable BSC Objectives, as provided at paragraph 3 of SLC C3.

Terms

- 15) The Proposal shall set out proposals to price the following types of Demand Control³ actions in to cash-out at an administrative value:
- (a) Demand reduction instructed by NGET;
 - (b) emergency manual Demand Disconnection.
- 16) Further consideration may be given as to whether to also price automatic low Frequency Demand Disconnection (LFDD) into cash-out at an administrative value.
- 17) The administrative value will be the 'VoLL Price', which will be set to £3000/MWh by early winter 2015/16, and increase to £6000/MWh by early winter 2018/19⁴.
- 18) The Proposal shall set out proposals for the value of the VoLL Price to be subject to the standard BSC Code Modification provisions under Section F of the BSC but for provision to be included in the BSC for the Authority to also have the discretion to direct changes to this VoLL Price.
- 19) The Proposal shall set out proposals for a single value of VoLL Price to exist at any time, to be applied to all forms of relevant Demand Control actions.
- 20) The Proposal shall set out proposals for all Demand Control actions to be treated similarly to other balancing actions for the purposes of calculating the cash-out price, so Demand Control actions are included in the stack of balancing actions, with the VoLL Price and volume attached, and subject to flagging and tagging procedures⁵.
- 21) The Proposal shall set out proposals for a 'top down' approach⁶ (as described in the section on 'Including a cost for Demand Control actions in cash-out prices' in Chapter 3 of the FPD) for Demand Control volumes to be incorporated into the indicative system imbalance prices (published 15 minutes after a Settlement Period) and initial

³ Demand Control is defined in paragraph GD.1 of the Grid Code.

⁴ These figures assume a Capacity Market (CM) will be introduced in GB. Should a CM not emerge or be delayed the Authority may consider directing changes to the level of VoLL.

⁵ For instance subject to Continuous Acceptance Duration Limit (CADL). In terms of the derivation of the final ranked set of system actions, as set out in Annex T-1 of the BSC, the treatment of Demand Control actions will be consistent with that of System Buy Actions (i.e. the provisions for flagging, tagging and classification will apply).

⁶ In developing the proposal the approach suggested in the Business Rules that accompany the FPD should be considered for both the 'top down' and 'bottom up' approaches, as described in the FPD.

cash-out price calculation (The Interim Information (II) run)⁷. In formulating these proposals industry should:

- a) Ensure that a 'top down' approach should be based on the estimate of SO-instructed volume of disconnection and voltage reduction actions in the cash-out price for the indicative system imbalance price published 15 minutes after a given Settlement Period;
- b) Give due consideration to the incorporation of a volume for Low Frequency Demand Disconnection (LFDD) as far as reasonably practicable;
- c) Give due consideration to whether more accurate adjustments⁸ can be made in time for the II run as far as reasonably practicable.

22) The Proposal shall set out proposals for a 'bottom up' approach (as described in the section on 'Including a cost for Demand Control actions in cash-out prices' in Chapter 3 of the FPD), potentially based on Licensed Distribution System Operator (LDSO) data, to be used to improve the accuracy of Settlement, including to provide a more accurate calculation of cash-out prices for SF⁹ and later settlement runs and adjust supplier imbalance volumes. Supplier imbalance volumes should be restored to their pre-Demand Control positions. In formulating these proposals industry should:

- a) Ensure that these proposals set out that supplier imbalance volumes should be corrected to account for SO-instructed disconnection;
- b) Ensure that these proposals set out that supplier imbalance volumes should be corrected to account for automated LFDD as far as reasonably practicable;
- c) Give due consideration to whether the proposals should adjust supplier imbalance volumes for voltage reduction as far as reasonably practicable;
- d) Ensure that these proposals set out that supplier's imbalance volumes should be corrected even if the Demand Control action is subject to flagging and tagging.

Improving the way reserve is incorporated in cash-out prices

Issues

23) The issues that are resolved by the introduction of an improvement to the way reserve is costed through a Reserve Scarcity Pricing (RSP) function can be found in

⁷ Indicative system imbalance prices are calculated and published via the Balancing Mechanism Reporting Service (BMRS) approximately 15 minutes after the end of the Settlement Period. The first calculation run (referred to as the initial cash-out price) is called the 'Interim Information' (II) run and is performed 5 working days after the given Settlement Date.

The Settlement calculations are performed several times for the same date between 5 working days after the date to approximately 14 months after.

⁸ A process that increases accuracy compared to the process for the indicative system imbalance price published 15 minutes after a Settlement Period.

⁹ Following the BMRS '15-minute run' and the II run, the 'Initial Settlements' (SF) Run is approximately 16 working days after the date of the Settlement Period in question and is the first run that monies are exchanged on. Further information can be found in BSCP01 on the ELEXON website.

Chapter 1 and the sections on 'Improving the way reserve is incorporated in cash-out prices' in Chapters 2 and 3 of the EBSCR FPD document.

24) These issues relate to the furtherance of the Applicable BSC Objectives, as provided at paragraph 3 of SLC C3.

Terms

25) The Proposal shall set out proposals to price Balancing Mechanism (BM) and non-BM Short Term Operating Reserve (STOR) actions into cash-out using an RSP function methodology. The RSP function will produce a price in each Settlement Period that reflects the value of reserve to the system (the 'RSP price'). Under this approach, accepted STOR actions should enter the cash-out calculation at a price which is the greater of the STOR utilisation fee and the RSP price. These actions should be subject to the normal cash-out calculation, including flagging and tagging procedures.

26) The Proposal shall set out proposals to no longer allocate STOR availability fees via the Buy Price Price Adjustment (BPA). However, the BPA will remain in place for the allocation of BM StartUp costs and Forward Contracts.

27) The Proposal shall set out proposals for the RSP price to be equal to VoLL Price multiplied by the Loss of Load Probability (LOLP) for each Settlement Period. This is the VoLL Price set out in paragraph 17 above.

28) The Proposal shall set out proposals for the LOLP used to determine the RSP price in each Settlement Period to be calculated by National Grid according to a new 'LOLP calculation methodology'. This will be governed, reviewed and consulted upon (regularly as needed) by the BSC Panel, and subject to the approval of the Authority. Due consideration should be given by NGET to the precise design of the LOLP calculation methodology. The methodology will specify that:

- a) The LOLP calculation should use dynamically available information about the system including, but not limited to, the total amount of available capacity, the characteristics of capacity available and the forecast demand for the relevant Settlement Period;
- b) The LOLP for each Settlement Period should be calculated using information available at Gate Closure and calculated and published to the market as soon as reasonably practicable after Gate Closure and in time for the indicative cash-out price published 15 minutes after a Settlement Period;

- c) Available capacity should include available BM STOR and non-BM STOR, but should not include Supplemental Balancing Reserve (SBR), Demand Side Balancing Reserve (DSBR)¹⁰ or any emergency actions¹¹;
- d) Available capacity should account for the Reserve for Response required in each Settlement Period.

29) The Proposal shall set out proposals for NGET to calculate and publish one or more indicative LOLPs for each Settlement Period ahead of Gate Closure. Due consideration should be given by NGET to the frequency and timing of these indicative LOLPs. For example, they could be published at 4 hours ahead, 3 hours ahead and 2 hours ahead of the relevant Settlement Period.

Single cash-out price

Issues

The issues that are resolved by the introduction of single cash-out prices can be found in Chapter 1 and the sections on 'Single cash-out price' in Chapters 2 and 3 of the EBSCR FPD document

30) These issues relate to the furtherance of the Applicable BSC Objectives, as provided at paragraph 3 of SLC C3.

Terms

31) The Proposal shall set out proposals for the determination of the Energy Imbalance Price in a given Settlement Period to depend on the value of Net Imbalance Volume (NIV) in that Settlement Period, with a strong preference for this to be achieved by early winter 2015/16, as follows:

- (a) If NIV is negative, the Energy Imbalance Price should be determined according to the existing System Sell Price Main Price calculation.
- (b) If NIV is positive, the Energy Imbalance Price should be determined according to the existing System Buy Price Main Price calculation.
- (c) If NIV is equal to zero, the determination of the Energy Imbalance Price should be developed by the modification workgroup.

¹⁰ SBR and DSBR should be excluded from the calculation of the margin unless this would be inconsistent with how these services are priced into cash-out, which is still to be decided.

¹¹ Emergency actions include Emergency Instructions as defined in the Grid Code.

Miscellaneous Terms

- 32)The Proposal shall make clear that the specific proposals put forward by NGET under paragraphs 11-12, 15-22, 25-29 and 31 are intended to facilitate and not preclude (a) any further consideration of the relevant issues; and / or (b) development of the Proposal under the BSC Modification Process so that it addresses the issues for cash-out and principles identified - above and in the FPD - in a way that better achieves the purposes and objectives of the Proposal as set out in these directions.
- 33)In addition to the Proposal NGET shall raise any such consequential proposals for modification to the BSC or other industry codes, as are required for the purpose of giving effect to the proposals specified above.
- 34)Modification proposals developed pursuant to these directions shall serve the EBSCR objectives and relate to the specific issues the EBSCR seeks to address.