

## ENERGY MARKET INVESTIGATION

### **Summary of responses to the consultation on the Draft Energy Market Investigation (Electricity Transmission Losses) Order 2016, associated Draft Explanatory Note, and Modified Draft Order**

#### **Introduction**

1. On 11 October 2016, the Competition and Markets Authority (CMA) consulted on a draft order (the Draft Order) and a draft explanatory note (the Draft Explanatory Note) for the implementation of the remedies set out in paragraph 20.22 of the energy market investigation final report (the Report).<sup>1</sup> On 4 November 2016, the CMA published a modified draft order (the Modified Draft Order) for consultation, reflecting some additional work carried out after the publication of the Draft Order, by the CMA and the industry. Both consultations closed on 11 November 2016.
2. In response to these consultations, the CMA received seven submissions relating to the Draft Order, Modified Draft Order and the Draft Explanatory Note. Non-confidential versions of the responses received are available on the CMA's webpages.<sup>2</sup> This paper sets out the main changes which have been made to the Modified Draft Order as a result of those submissions and also gives reasons why certain suggested changes were not made. Minor changes (such as correction of typographical and spelling errors, minor clarifications included in the Draft Explanatory Note, and other consequential changes) are not discussed in detail in this paper. References to specific Articles in this paper refer to the final version of the order published on the same date as this paper (the Order), rather than to any earlier drafts. Capitalised terms in this paper have the same meaning as defined in the Order, unless otherwise specified below.
3. None of the modifications made to the Modified Draft Order are considered to be material so as to require further consultation.
4. The two main comments received in response to the consultations related to:

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<sup>1</sup> [Energy market investigation: Final report.](#)

<sup>2</sup> [Energy market investigation case page.](#)

- (a) the treatment of high voltage direct circuits (HVDC) and interconnectors;  
and
- (b) the interaction between the remedy and Contracts for Difference (CfDs).

### **Treatment of HVDC lines and interconnectors**

5. SSE raised concerns with the treatment of HVDC lines (paragraph 2.2.2 of SSE's submission) and interconnectors (paragraph 2.2.3 of SSE's submission) within the load flow modelling, as set out in paragraph 17(c)(ii) of Schedule 1.
6. SSE considered that the treatment of HVDC lines in the Draft Order was inappropriate and inconsistent with the treatment of HVDC lines in the Transmission Network Use of System (TNUoS) charging methodology. In its view, the solution included in the Draft Order would tend to impose greater losses on flows of energy from North to South and to sharpen the distributional impacts of the remedy.
7. The approach taken by the CMA with respect to HVDC is set out in paragraphs 49 to 51 of the Explanatory Note and in the [Notice of intention of making an order](#) published on 11 October 2016. While, in order to comply with our Report, the assumptions for the alternating current (AC) parts of the network are to be in all technical aspects identical to modification proposal P229, the CMA believes such assumptions do not need to apply to direct current (DC) circuits. The industry, within the context of P350, has proposed a technical solution – set out in the [P350 Assessment Procedure Consultation](#) that the CMA considers to be consistent with the Report.
8. As noted by SSE there are differences between the methodology for calculating locational transmission **losses** charges (TLM) and locational transmission network **access** charges (TNUoS). The CMA does not believe that it is necessary for these methodologies to be identical. The CMA notes, in this respect, that the models used to compute zonal loss factors and zonal TNUoS charges work differently. Therefore, the CMA does not consider that the TNUoS charging methodology ought to be regarded as the benchmark against which the HVDC line shall be treated within modification proposal P350. The CMA's view is that, taking into consideration the difference in the models used for this remedy and for TNUoS, using different methodology is not inappropriate or inconsistent.
9. The CMA disagrees with SSE's submission, which suggested that the proposed approach allocates greater losses to flows from North to South (and hence sharpens distributional impacts) compared to a methodology that

sends economically efficient signals regarding the transmission losses caused by network users in different parts of the country:

- (a) On the contrary, “by modelling each HVDC connection as a sink at one of the relevant nodes and a corresponding source (accounting for any intervening losses over the circuits) at the other Node”, and assuming that a share of flows from North to South (equal to  $1/3^3$ ) is running through the HVDC bootstrap, the modification proposal effectively attempts to reflect in the most accurate way the impact of the (future) HVDC circuit on transmission losses.<sup>4</sup>
  - (b) Hence, the North-South differentials in TLFs will reflect an average of the assumed incremental cost of losses on AC networks and the incremental cost of losses on HVDC networks. This is similar to the TNUoS methodology, in which North-South differentials in TNUoS charges are driven by modelled incremental cost of expanding transmission, based on an average of the assumed cost of expanding onshore AV and HVDC circuits.
10. The CMA also notes that, no matter how the HVDC circuits are currently modelled within the load flow model, the results are necessarily an approximation because TLFs are calculated based on historical data and set for a season at a time. Moreover, as data on historic flows across the HVDC circuits becomes available, further BSC Modifications could be raised that improve the accuracy of the calculation, provided that they are consistent with the Transmission Losses Principle.
11. As regards the exclusion of power to or from interconnectors when calculating Zonal TLFs values (to accommodate EU legislation), SSE considers that it would “dampen the locational signal determined by the flow model”.
12. The CMA disagrees with the argument that the Modified Draft Order (and P350) dampens locational signals determined by the flow model in the way SSE suggests. By including interconnector power flows in the calculation of Nodal TLFs, the Order ensures that TLFs capture the incremental effect of interconnector flows on transmission losses. Meanwhile, removing power flows to and from interconnectors when setting TLFs at the Zonal level guarantees that the resulting TLFs reflect an average of the nodal TLFs only of those participants that are eligible to be allocated losses. This produces a more efficient signal than if the zonal TLFs included the nodes at which

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<sup>3</sup> This ratio is intended to reflect how National Grid expects to operate the link in the future.

<sup>4</sup> Elexon (November 2016), [Assessment Procedure Consultation – P350 'Introduction of a seasonal Zonal Transmission Losses scheme](#), p8.

interconnectors connect when aggregating results from the load flow model across nodes.

13. For the avoidance of doubt, the modelling exercise underpinning the CMA's decisions set out in Sections 6 and 7 of the Report assumed that interconnectors would not be subject to locational TLFs. Hence, the evidence base that led to the CMA's decisions did not hinge on this assumption.
14. EDF suggested some additional provisions relating to HVDC. For the reasons set out in the Explanatory Note (see paragraphs 49 to 51), the CMA considers that such suggestions should be considered within the context of the BSC process.
15. In view of this, and having considered SSE's submission, the CMA has decided not to amend the Modified Draft Order on these points.

### **Interaction between the remedy and CfDs**

16. EDF, SSE and RenewableUK raised a concern about the linkages between locational and seasonal factors and the calculation mechanisms for CfDs. They commented on the change to the calculation of Adjusted Seasonal Zonal TLF values introduced in the Modified Draft Order, ie the introduction in that calculation of a Transmission Loss Factor Adjustment.
17. The CMA has considered these representations. In addition, it has had several meetings and email exchanges on this point with Ofgem, Elexon, the Low Carbon Contracts Company (LCCC) and BEIS. Also, a CMA representative attended the P350 Workgroup meetings of 18 October 2016 and 5 December 2016 when this issue was discussed by the industry. Having considered these submissions, and for the reasons set out in the Explanatory Note, the CMA has decided not to amend the calculation of the Adjusted Seasonal Zonal TLF values set out in the Modified Draft Order. It has however introduced a power for the CMA to mandate that the value of the Transmission Loss Factor Adjustment is equal to 0.
18. The approach taken by the CMA on this matter is set out in paragraphs 52 to 56 of the Explanatory Note.

### **Other representations**

19. Two parties, Elexon and National Grid, suggested minor clarifications on the wording of the Draft Explanatory Note, which have been reflected in the final version. Both parties welcomed the CMA's engagement with the industry process relating to [the modification proposal P350 under the Balancing and](#)

[Settlement Code](#). Elexon confirmed that the Modified Draft Order aligned with the P350 legal drafting at the time of its representation.

20. RenewableUK raised a number of points challenging the decision set out in the Report regarding the package of remedies to be implemented in order to remedy, mitigate or prevent the Locational Pricing AEC (see paragraph 20.22 of the Report). As noted in its responses, RenewableUK had already raised the same points in response to the Provisional Decision on Remedies. The CMA set out the reasons underpinning its decision in the Report, including its views regarding Ofgem's previous decision in relation to modification proposal P229,<sup>5</sup> the interaction of the package of remedies with TNUoS charges and its effects on cross-border flows through interconnectors. The CMA does not consider that any relevant material change of circumstance has occurred since the publication of the Report (nor has RenewableUK identified any), and does not consider it necessary to reiterate these views here.
21. SSE noted that the Draft Order is detailed and prescriptive, which therefore requires a high degree of precision on every detail. The CMA's approach in drafting the Order reflects the decision set out in the Report to impose a remedy that is identical in all its technical details to modification proposal P229. In order to mitigate the risk identified by SSE, the CMA has engaged with the industry process relating to modification proposal P350, as noted by National Grid and Elexon.
22. SSE argued that it was unnecessary for clause (g) to be inserted into paragraph 3 of Condition C3 of the transmission licence. The rationale for this inclusion has been clarified in the Explanatory Note (see paragraphs 77 to 79).
23. EDF argued that the changes to the supply and generation licences are unnecessary and inconsistent with existing obligations, and potentially discriminatory compared with unlicensed parties. The rationale for this inclusion is set out in paragraph 80 of the Explanatory Note. In case of conflict between the BSC and the Order, the latter shall prevail and, therefore, contrary to what is argued by EDF, licensees should not be subject to licence non-compliance in relation to the BSC.
24. SSE noted an apparent inconsistency within changes to licence conditions in relation to rules governing potential conflicts between the Order and the Balancing and Settlement Code (and the impact of Article 5.3 of the Order on such conflicts). An amendment to Schedules 4 and 5 has been made to the

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<sup>5</sup> See [Elexon, Final Modification Report P229: Introduction of a seasonal Zonal Transmission Losses scheme](#).

Modified Draft Order on this point. These amendments to the Draft Order, relating to the generation and supply licences, clarify for the avoidance of doubt that such rules will not apply if the Order ceases to have effect (eg if Article 5 has been satisfied).