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To all interested stakeholders

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Update on charging arrangements for Embedded Generation

We started a review of the transmission network charging arrangements for embedded generators in January 2016. Our Open Letter on charging arrangements for Embedded Generation (**EG**)[1] dated 29 July 2016 (the "**July Open Letter**") set out our concerns in relation to current transmission charging arrangements for EG and invited input to the development of our thinking in this area. We have received a large number of responses to the July Open Letter and the non-confidential ones are now available on our website[2]. In addition, the Connection and Use of System Code ("**CUSC**") Modification Panel has recently submitted to us a Final Modification Report (FMR) in relation to two proposed modifications to the current Transmission Network Use of System ("**TNUoS**") charging arrangements for EG.[3]

This letter aims to set out the key developments since our July Open Letter which should provide further clarity to market participants, in particular to those bidding into the upcoming Capacity Market (CM) auctions.

1. Summary

We received 145 responses to our July Open Letter from a wide range of organisations. A large number of respondents agreed with the concerns expressed in the July Open Letter – in particular, the concern that the rising TNUoS demand residual payments to EG may be unsustainable. Many respondents, however, recommended that Ofgem should launch a Significant Code Review ("**SCR**") to look at the rising TNUoS demand residual payments alongside other issues. We are considering this issue carefully, but our current view is that postponing a decision on the modification proposals pending a wide-ranging review of network charging for EG would cause considerable delay to such reform, if required. During that time, the TNUoS demand residual payments to EG would continue to escalate, with the risk of further sustained and significant market/investor uncertainty and distortion. We recognise the desire from industry to consider wider reform of the regulatory and market arrangements governing the energy system, and we will set out our initial thinking on this in our draft Forward Work Programme later in December.

In light of the evidence received since our July Open Letter, we still consider the TNUoS demand residual payments to EG to be a major concern. We think they are larger than distortions from the other types of Embedded Benefits (EB) and increasing. We remain

[1] https://www.ofgem.gov.uk/system/files/docs/2016/07/open_letter_-_charging_arrangments_for_embedded_generation.pdf
[2] https://www.ofgem.gov.uk/publications-and-updates/open-letter-charging-arrangements-embedded-generation
[3] http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP264

concerned that this distortion is having an impact on the capacity and wholesale markets, driving up costs to consumers. Our current view is that taking early action to address rising demand residual payments is likely to be in consumers' interests.

We expect to make a decision on the CUSC modification proposals that are the subject of the recently received FMR (CMP264 and CMP265) in the first half of next year, following consultation on a minded-to decision and draft impact assessment (IA) in early 2017. This letter sets out our current thinking on some of the issues raised by those modifications and by response to our July Open Letter: this thinking is provisional and subject to further analysis and consultation.

We have not yet taken a view on whether to approve any of the CUSC Modification Proposals or Workgroup Alternatives ("WACMs") set out in the FMR. It would, therefore, be prudent for participants in the CM auction to assume that by no later than 2020, TNUoS demand residual payments to EG could be as low as the most significant reduction proposed in the code modifications and WACMs under consideration.

Having carefully reviewed the evidence that has been presented to us in responses to the July Open Letter, our current thinking (subject to further analysis and consultation) remains that the value that EG receives from the TNUoS demand residual payments should include avoided Grid Supply Point (GSP) costs. The evidence we have seen to date suggests that avoided GSP costs are between £1/kW and £6/kW, as set out in our July Open Letter.

Some parties also consider that these payments could include the TNUoS generation residual payments when/if these become negative. We indicated in our July Open Letter that we think it is more appropriate to review the TNUoS generation residual as part of a targeted charging review, and have previously highlighted concerns regarding the appropriateness of the generation residual charge turning negative. However, we intend to assess options, including payment of the generation TNUoS residual, through our IA on the CUSC modifications, on which we will be consulting.

2. Responses to the July open letter

We have considered all of the 145 responses, as well as meeting many stakeholders to discuss them. As a result, we have received a large amount of new evidence and analysis which has helped our understanding of these issues.

A large number of respondents agreed with our initial thoughts in the July Open Letter, that the rising TNUoS demand residual payments to EG are unsustainable. The majority of respondents either explicitly stated that the rising TNUoS demand residual payments are a problem which needs to be addressed or did not oppose the view that the payments needed to be addressed. A small number of respondents stated that the TNUoS demand residual is not an area requiring investigation.

We note that many respondents to the July Open Letter have called for a significantly wider review of network charges than the scope of the changes to the EB arrangements and the other issues we set out in our July Open Letter. Some respondents voiced their concerns on the consequences a change may have, including the impact on storage, CHP, local balancing and supply models as well as impacts on security of supply and investor certainty. We take these concerns very seriously. However, we are also concerned that postponing our consideration of reform to the TNUoS demand residual and undertaking such a wide-ranging review of network charging would allow the distortion created by the TNUoS demand residual payments to escalate further, introducing significant market/investor uncertainty for a considerable period of time. We are considering these issues carefully and engaging with industry on how best to establish an overall framework for addressing the range of issues under consideration.

We will address some of these concerns by undertaking an IA on the CUSC modifications, through our proposed targeted review of charging arrangements and our call for evidence

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on a smart, flexible energy system.[4] This call for evidence sets out a range of potential further reforms to facilitate the transition to a more flexible energy system and this work is proceeding alongside and integrated with our thinking about network charging for EG.

3. Update about the code modification process

As set out above, we have received the FMR on proposed modifications CMP264 and CMP265 (and CUSC Workgroup Alternatives) dealing with proposed changes to TNUoS charging arrangements for EG. We expect to make a decision on these proposals in the first half of next year. Given the significance of the issues raised and the range of views expressed on this matter, we will undertake and consult on a draft IA[5] and on a minded-to decision. We plan to carry out this consultation in early 2017, before reaching a decision in time for any changes to these arrangements to be introduced in April 2018.

The CUSC Modification Workgroup proposed a wide range of potential alternatives to the two original modification proposals. The CUSC Modification Panel has voted on CMP264, CMP265 plus 23 Workgroup Alternatives. The CUSC Panel did not agree by a majority vote on a single modification that best facilitates the CUSC objectives. However, WACMs 1,2,3,4,5,6 and 7 were all voted as better than the baseline. The Authority will take account of this recommendation when making our final decision.

The WACMs that the Panel voted as better than the baseline show a range of views as to the value that embedded generators bring to the transmission system (above the inverse of the locational demand payment which they receive). This range of views would imply additional payments set anywhere from 0 to around £22/KW in 2020/21 – based on current charging forecasts.

There was also some support for exposing EG to the TNUoS generation residual charge, which is due to turn negative next year, and therefore to provide payments to generators. It was felt by some CUSC Modification Panel members that competition would be better facilitated by allowing both transmission and distribution connected generators to receive these payments.

The potential for the TNUoS generation residual to turn negative is primarily caused by a €2.5 cap on overall generation TNUoS charges (which include both the TNUoS locational and residual charges). When considering the potential impact of exposure of EG to the TNUoS generation residual, we would like to ensure stakeholders note our decision on CUSC modification CMP255, where we indicated that were this cap on overall TNUoS generation charges removed, it would be best to "*move towards non-negative residual charges*" for generators.[6]

We continue to consider the TNUoS demand residual payments to EG to be a major concern. These payments seem to us to cause a larger distortion on the wholesale and capacity markets than other aspects of embedded benefits and that distortions seems currently to be increasing. We remain concerned that this distortion is having an impact on the CM and wholesale markets, and that taking early action on this is likely to be in consumers' interests. The voting statements submitted by CUSC Modification Panel members supported the view that the TNUoS demand residual payments currently received by EG are not cost reflective.

In terms of transitional arrangements, we consider it would be likely to be in consumers' interests for any changes to the TNUoS demand residual payments to EB to be introduced by 2018/19, with any changes to reflect the value that EG provides to the transmission system in these payments to be implemented no later than 2020/21. Several respondents to the July letter raised the issue of grandfathering current arrangements for existing EB. We will be carefully considering these issues, including the impact on competition and investor confidence, further as part of the IA we will undertake before reaching a decision on the modifications.

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[4] https://www.ofgem.gov.uk/publications-and-updates/smart-flexible-energy-system-call-evidence
[5] Pursuant to section 5A of the Utilities Act 2000
[6] https://www.ofgem.gov.uk/system/files/docs/2016/08/cmp255_d.pdf

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A number of respondents to our July Open Letter highlighted potential security of supply risks which could result from changes to the TNUoS demand residual, though none provided quantitative analysis of the degree of potential impact. We have considered the security of supply impact of changes to the current network charging system and are currently of the opinion that the changes suggested, in of themselves, are unlikely to materially alter the short term risks to security of supply. We also note that the majority of the CUSC Modification Panel did not view the security of supply risk as material.

4. Approach to further review of network charging arrangements

In our July Open Letter, we indicated that we would set out further thinking on the other elements of the embedded benefit and the treatment of sunk and fixed costs including for storage and 'behind the meter' generation.

Our overall objective in respect of these charges is to ensure that fixed and sunk costs are recovered in a way that minimises distortion of efficient outcomes. For example, we consider that changes to embedded benefit arrangements may push more connection of generation behind the meter or connection via private wires. This is an important issue that we aim to treat as a priority in future related network charging work.

We have been progressing this work alongside the modification process and the Call for Evidence on a Smart, Flexible Energy system, and we aim to set out the proposed way forward early in 2017. Consistent with previous reviews, we envisage this could take at least two years to complete.

Many respondents to the July Open Letter have called for the issue of the TNUOS demand residual highlighted in our Open Letter to be considered as a part of a significantly wider review of network charging arrangements for EG. Whilst we fully intend to carry out a review of the regulatory and market arrangements governing the energy system, we are mindful of the risk that the distortion caused by current TNUoS demand residual arrangements may escalate further and introduce significant market/investor uncertainty for a considerable period of time. Therefore, we do not consider that this precludes us from making an early decision on modification proposals CMP264 and CMP265.

Any decision we take on the modifications considered in the FMR will not prejudge or prevent further changes to the charging arrangements, which may come out of further reviews. In particular any new arrangements that come out of further reviews of network charging may supersede the arrangements put in place by the mods.

In the meantime, our role in the CUSC and BSC modification process is to consider and make a decision on the modification proposals that have been submitted to the Authority. The decision we are required to make is whether any of those modifications better facilitate the applicable CUSC objectives than the arrangements currently in place; and of those that do, which best facilitates those objectives. It is not to consider whether any of these modifications are the best of all conceivable other options that have not been raised for our consideration.

5. Next steps

Our next steps are that we will:

- publish a minded to decision and draft IA on the code modifications for consultation in early 2017, with a final decision following after that in time for any changes to be implemented by April 2018
- set out our proposed way forward on the further work on network charging in early 2017, including on the priority issues identified in our July open letter

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If you would like to contact us to discuss the issues outlined in this letter, please contact Andrew Self at (ElectricityNetworkCharging@ofgem.gov.uk).

Yours faithfully,

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