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Dear Andrew,

Minded to decision and draft Impact Assessment of industry's proposals (CMP264 and CMP265) to change electricity transmission charging arrangements for embedded generators

We welcome this opportunity to respond to the consultation on Ofgem's minded-to decision and draft Impact Assessment of industry's proposals (CMP264 and CMP265) to change electricity transmission charging arrangements for embedded generators.

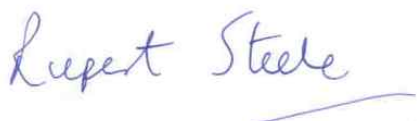
In support of our response we asked independent economic consultants, Oxera, to prepare a short report appraising the economic assessment underlying Ofgem's impact assessment and considering some of the concerns that have been raised by industry players. We make reference in this response to key Oxera findings and will submit the report to Ofgem shortly.

We agree with Ofgem's minded-to decision to approve WACM4, which we believe would be in the best interests of consumers and would go some way to restoring a level playing field between generators connecting to the transmission system and those connecting to a distribution system and remove a significant distortion currently affecting the Capacity Mechanism.

We note that the draft Impact Assessment indicates that there would be significant additional benefits to consumers (circa £0.2bn) from immediate rather than phased implementation of the modification (ie WACM3 rather than WACM4). Whilst we do not disagree with Ofgem's wish to allow market participants additional time to adapt to changes in charging arrangements, we believe this represents a particularly generous outcome for embedded generators. We would encourage Ofgem to make it clear in its final decision that this transitional period should not be seen as setting a precedent for future decisions.

Our responses to the detailed questions in the Consultation are contained in the attached Annex.

Yours sincerely,



Rupert Steele
Director of Regulation

**MINDED TO DECISION AND DRAFT IMPACT ASSESSMENT OF INDUSTRY'S
PROPOSALS (CMP264 AND CMP265) TO CHANGE ELECTRICITY TRANSMISSION
CHARGING ARRANGEMENTS FOR EMBEDDED GENERATORS
- SCOTTISHPOWER RESPONSE**

CHAPTER 2: BACKGROUND

Question 1: Do you agree with our problem definition and that the Transmission Network Use of System (TNUoS) Demand Residual (TDR) payments to sub-100MW Embedded Generation ("smaller EG") are distorting dispatch, wholesale price, the Capacity market (CM) and that they pose an increased cost to consumers?

As evidenced in the Final Modification Report (FMR), payments to small EG are made by Suppliers in addition to the total Demand TNUoS charges and therefore represent an additional cost to consumers when passed through in the competitive market. The projected growth in TDR payments in future years represents a significant additional burden on consumers for which there would appear to be no corresponding benefit.

We agree that the calculation of TDR payments to small EG on the basis of their output over the Triad period leads to inefficient dispatch decisions and consequential distortions to the wholesale price. It also creates a significant distortion in the Capacity Mechanism.

Question 2: Do you agree that rising TDR payments to smaller EG is a problem which needs to be addressed?

Yes, we agree that the rising TDR payments to smaller EG present a problem which needs to be addressed. As outlined in Figure 1 of the draft Impact Assessment, the TDR payments available to smaller EG are forecast to grow from £45/kW in 2016/17 to £72/kW in 2020/21. When the growth in smaller EG is considered, the total cost of TDR payments was forecast to grow from £343m (2016/17) to £650m (2020/21) as outlined in Table 5 of the Workgroup Consultation Report. This growth in the TDR payments in future years represents a significant additional burden on consumers for which there would appear to be no corresponding benefit.

CHAPTER 4: ASSESSMENT AGAINST DECISION MAKING CRITERIA

Question 3: Do you agree with our interpretation of the Applicable CUSC Objectives?

We agree that the two principal CUSC Objectives impacted by the proposed modifications are, in summary, (a) facilitating effective competition and (b) ensuring that charges are, so far as reasonably practicable, cost reflective. We also agree that Ofgem should consider whether the modification better facilitates the CUSC Objectives than the current baseline, is neutral in that respect, or is worse.

We consider that Ofgem has correctly interpreted the Applicable Objectives and in particular has identified the correct matters to consider – in the case of competition by assessing each of the five key features of the Modification identified at paragraph 4.3 and in the case of cost reflectivity in accordance with the approach described in paragraphs 4.36 and 4.37.

Question 4: Do you agree with our assessment against the applicable CUSC Objectives and statutory duties? Please provide evidence for any differing views.

We agree with Ofgem's assessment of the key features of the modifications against the applicable CUSC Objectives.

Reducing the level of TDR payment to smaller EG to a value which reflects the avoided cost of GSP reinforcement (as in WACMs 3 and 4) results in charges which are more cost-reflective and by reducing discrimination between smaller EG who receive such payments and larger generators who do not, better facilitates competition than the current baseline.

We agree that the modification should seek to avoid presenting any perverse incentives on smaller EG not to generate over periods of high demand (the Triad period) and support the use of flooring in these and other WACMs. While the flooring mechanism may marginally reduce the strength of the locational signal, we believe that this small impact on cost reflectivity is outweighed by the avoidance of a perverse incentive.

We agree with Ofgem's assessment that exposing smaller EG to the generation residual (as in WACMs 1, 2, 5, 12 and 14) may potentially be detrimental to competition due to its interaction with the flooring mechanism, which could prevent smaller EG from being exposed to positive generation residual charges (while larger generators are exposed). It is also not clear that there would be sufficient justification for the payment of a negative generation residual charge to smaller EG on the grounds of cost reflectivity. In their report, Oxera consider the generation residual in the context of the remaining network-related embedded benefits (TNUoS and BSUoS) as well as the phased removal of the TDR benefit. They observe that embedded generators are unlikely to be at a disadvantage relative to transmission connected ones in terms of transmission related charges.

As noted in response to Question 6, we agree that introduction of a substantial grandfathering period would introduce a significant distortion to competition between smaller EG benefiting from grandfathering and those generators (smaller EG connected after a cut-off date, larger EG and transmission connected generators) who do not, and that this distortion would persist for the grandfathering period.

Table 23 of the draft Impact Assessment indicates that there would be significant additional benefits to consumers (circa £0.2bn) from immediate rather than phased implementation of the modification (ie WACM3 rather than WACM4). Immediate implementation would both introduce more cost-reflective payments to smaller EG and remove the distortion to competition at an earlier date. However, we acknowledge the importance of allowing a measure of relief for market participants who have already made significant capital investments and agree that the overall impact on competition is broadly neutral from a phased implementation. We do however consider this represents a particularly generous outcome for embedded generators, and would encourage Ofgem to make it clear in its final decision that this transitional period should not be seen as setting a precedent for future decisions.

Question 5: In our assessment against the objectives, do you believe there are any relevant assessments we have not taken into account?

No. We believe that Ofgem's assessment against the CUSC objectives is comprehensive.

Question 6: Do you agree with our assessment that, in this instance, grandfathering as set out in the WACMs would be unlikely to best facilitate the CUSC Objectives when compared to the other options available to us?

Yes. We agree that the introduction of a substantial grandfathering period would introduce a significant distortion to competition between smaller EG benefiting from grandfathering and smaller EG who do not. Grandfathering would also perpetuate the distortion in competition between small EG benefiting from grandfathering and larger generation on both the distribution and transmission networks. This would persist for the duration of the grandfathering period and would increase the detriment to consumers. (While our original CMP264 proposal applied to new plant only, this was explicitly a temporary measure pending the longer term reform envisaged in the modification.)

Question 7: Do you agree with our assessment that the value of the avoided GSP investment cost best facilitates the Applicable CUSC Objectives?

Yes, we agree that setting the value of the payment to smaller EG to the value of the avoided GSP investment is the most cost-reflective approach and best facilitates the Applicable CUSC Objectives. The Investment Cost Related Pricing methodology for TNUoS charging aims to reflect the incremental cost of investment in the transmission system from Users' siting decisions. As the supporting analysis in the CMP264/5 Working Group Report demonstrated, there are no differences in the power flows on the transmission arising from a user's decision to connect to the distribution rather than transmission system. Therefore, the only cost-reflective payment to smaller EG is one which reflects the avoided costs of investment at a GSP to meet additional demand. However, this only applies where a GSP is "off taking" to meet demand. At GSPs where the volume of embedded generation results in net exports, additional embedded generation will no longer allow investment to be avoided and the appropriate cost-reflective payment would be £0/kW. (In the extreme case, where net exports drive a need for reinforcement, the cost-reflective payment would be negative.)

This view is confirmed by Oxera's assessment of the Cornwall Report¹ which proposed significantly higher values. Oxera concluded that the Cornwall Report failed to explain why embedded generators reduce costs on the transmission system beyond the elements captured in the locational component of transmission charges and the avoided cost of GSP reinforcement. They also consider that the Cornwall Report does not provide a robust rationale for compensation of embedded generators beyond GSP reinforcement costs.

Question 8: Do you agree with our assessment of the impacts on security of supply? Please provide evidence for provided views.

We agree that implementation of the modification will have no material impact upon security of supply and indeed over the longer term may improve it due to economically efficient investment in new generation plant following the removal of distortions to competition.

For existing EG (or generation under construction where costs have been sunk) we see no reason to suppose that it would be commercially beneficial to shut such plant unless it has maintenance or other ongoing costs that make it unviable. It is unclear why TDR payments should be made available in order to prolong the life of plant that is beyond economic repair.

¹ Cornwall Energy's [report for the ADE](#), 'A Review of the Embedded Benefits accruing to Distribution Connected Generation in GB', 11 May 2016.

For EG which won CM contracts in past T-4 auctions but have not yet committed sufficient capital expenditure, there is clearly a risk that some capacity may withdraw. Of the circa 4 GW of EG which won capacity contracts in 2014, 2015 and 2016, we would expect a significant proportion to have deployed already, since embedded benefits make them profitable even ahead of receiving CM payments. Of those which have not deployed, it is likely that many will still show a positive NPV, given the three year phase-in period of WACM4 and the cost of withdrawing from CM contracts. Furthermore, the total includes 0.5 GW of batteries from the 2016 auction, around half of which already has EFR contracts.

We therefore think it possible that a proportion of this capacity – perhaps as much as 1GW – may withdraw, but we agree with Ofgem that this will not present a risk to security of supply as any shortfall can be made up in the relevant T-1 auction (eg from coal or mothballed CCGT plant). The fact that the recent Early Auction cleared at only £6.95/kW suggests that it may be possible to make up any shortfall relatively cost-effectively.

This conclusion is supported by Oxera's assessment, which concludes that effects on security of supply are likely to be limited.

Question 9: Please provide evidence to show if there are any other cost savings which small EG drive in comparison to larger (over 100MW) EG on the distribution system.

We are not aware of any other savings in the cost of investment in the transmission network (other than the avoided GSP reinforcement cost identified above) which are driven by the connection of smaller generation to a distribution network. Oxera have reviewed the case put forward by other parties to claim additional cost savings but found that these arguments were not robust.

Nor are we aware of any changes that are driven by small EG but not by larger generators (>100 MW) connected to the distribution system.

As regards the distribution network, if there are cost savings that are not adequately reflected in charges, this should be addressed via changes to distribution network charges – possibly as part of Ofgem's proposed Targeted Charging Review – but that would be no reason to delay making necessary changes to transmission network charges.

Question 10: Is there other evidence that payment above avoided GSP/generation residual would better facilitate the applicable objectives?

As outlined in our response to Question 4, we believe that payment of the generation residual to Smaller EG in conjunction with a price floor may give rise to a distortion to competition. Any payment above the avoided GSP costs would not better facilitate Objective (b) as it would not be cost-reflective and would be detrimental to Objective (a), as it would not better facilitate competition.

Question 11: Do you believe you have a legitimate expectation or contractual right for the continuation of TDR payment? If so, please provide evidence.

Transmission Network Use of System charges have been subject to open governance since the implementation of CAP188 in December 2010. The issue of payment of the TDR to smaller EG has been under regular review in connection with the discussion on the continuation of the Small Generator Discount under National Grid's Standard Transmission

Licence Condition C13 and in earlier fora such as the Transmission Arrangements for Distributed Generation Group (TADG).

Therefore we do not believe that Smaller EG can reasonably expect that the level of payment it receives through the TDR should continue at the same level (or significantly increase) without being subject to regulatory scrutiny and review. Prudent investors in Smaller EG should be expected take account of the risk that Ofgem may approve changes to the charging regime that better meet the CUSC objectives.

It has been suggested that if Ofgem decides in favour of WACM4, this might increase perceptions of regulatory risk, and therefore the cost of capital for companies bidding into future CM auctions. For the reasons above we consider that market participants and investors should already have been aware of the risk of such a change, and there is no reason to suppose that Ofgem's proposed decision would materially increase perceptions of risk.

We asked Oxera to comment on the likely impact of the minded-to decision on investor confidence and cost of capital. They concluded that the cost of capital for investments in generation would not be expected to change because of the carrying out of Ofgem's proposed decision. This was both because of the points mentioned above and because the cost of capital is driven by systematic (i.e. non-diversifiable) risk.

CHAPTER 5: DISTRIBUTIONAL ISSUES

Question 12: Do you agree with our assessment of the distributional issues?

We agree that the proposed modification will significantly reduce costs to consumers through the reduction in TDR payments to smaller EG and the increase in the size of the charging base from which the TDR will be recovered. The greatest reduction in payments will be to smaller EG with a business model predicated on low running (load factor) throughout the year but which aim to capture the TDR payment through running in a limited number of periods over the Triad. This is clearly demonstrated in Ofgem's analysis in Table 21 of the draft Impact Assessment.

Question 13: Are there any sectors that we may have overlooked?

We agree with Ofgem's assessment of the impacts of the small EG sectors considered in Section 5 of the consultation.

Going forward, smaller EG will be able to compete in the Capacity Mechanism on a level footing with larger generation to secure CM contracts.

We support Ofgem's proposal (paragraph 5.7) to address the issue of behind the meter (BTM) activities and potential incentives to move smaller EG behind the meter as a priority area within (or alongside) the Targeted Charging Review.

CHAPTER 6: QUANTITATIVE MODELLING RESULTS

Question 14: Do you agree with our modelling approach?

We agree with the modelling approach adopted and agree that the four scenarios (for the value of "x") four options (for grandfathering) and implementation with and without phasing

represent a practical method of assessing the potential impacts of the various WACMs presented to Ofgem. Use of the LCP EnVision model should ensure maximum consistency with National Grid's modelling for the Capacity Mechanism.

The empirical modelling results appear to be consistent with a theoretical assessment of the potential outcomes namely; reduction in the value of the payment to smaller EG will result in lower costs to consumers; drive investment in more efficient generation plant through higher CM Auction clearing prices resulting in lower average wholesale prices; and have no significant impact upon security of supply. In addition, the model validation described in Appendix 8 gives additional confidence in the model outputs.

We also asked Oxera to consider the modelling approach. They concluded that, while they had not been asked to comment on the detailed modelling assumptions made by LCP and Frontier, the findings of the Frontier/LCP modelling work appear to be consistent with economic theory. Oxera consider that average wholesale prices are not expected to be significantly affected by the carrying out of Ofgem's proposed decision, and it is likely that the consumer benefits from reducing TDR payments would be greater than any increase in costs arising from higher capacity market prices.

Question 15: Do you think that our background assumptions and using FES data is an appropriate approximation for the status quo?

Yes, National Grid's Future Energy Scenarios (FES) are formulated following extensive engagement with stakeholders and should form an appropriate background for the status quo.

Question 16: Where WACMs are not modelled directly, do you think our assessment is appropriate (see Appendix 8 for detail)?

The mapping of the various modelling scenarios to the Proposals and WACMs presented to Ofgem as outlined in Appendix 8 would appear to represent the key features of each option or a close approximation where a WACM is not modelled directly.

CHAPTER 7: ASSESSMENT OF SHORTLISTED OPTIONS

Question 17: Of the options available to us, do you agree that WACM4 best facilitates the applicable CUSC objectives?

While WACM3 would offer increased savings to consumers through earlier implementation without phasing, we recognise that WACM4 will mitigate the impact on market participants who have made significant capital investments and allow participants greater time to adjust and adapt.

As noted above, while we do not disagree with Ofgem's wish to allow some relief to market participants who have made significant investments, we believe this represents a particularly generous outcome for embedded generators. We would encourage Ofgem to make it clear in its final decision that this transitional period should not be seen as setting a precedent for future decisions.

Question 18: Do you believe that an implementation date of April 2018 best facilitates the applicable CUSC objectives?

Yes. Stakeholders have had considerable notice that a review of TDR payments to smaller EG was underway and that change was required. Further delay in implementation would result in increased cost to consumers and ongoing distortion to competition.

No substantive case has been made for any delayed implementation other than the unjustified expectation of the continuation of the status quo.

ScottishPower
18 April 2017