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Electricity Distribution Network Operators, Independent Distribution Network Operators, Independent Connection Providers, Distributed Connection Generators and other interested parties

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Dear Stakeholder

Ofgem's position on whether the voltage rule should take precedence over the High Cost Cap for Distributed Generation connections

Distribution Network Operators (DNOs) requested clarity on Ofgem's policy position in circumstances where two connection charging rules are triggered.

Our position is that when these circumstances arise the voltage rule should take precedence over the High Cost Cap (HCC). We would welcome a modification to be brought forward to the Common Connection Charging Methodology (CCCM) to reflect this position.

Background

In December 2014 we consulted¹ on our view that the voltage rule should take precedence over the HCC in situations where Distributed Generation (DG) connections trigger both rules.

Under the Electricity Distribution Licence (the Licence), all DNOs must have in force a CCCM. This is set out in Schedule 22 to the Distribution Connection and Use of System Agreement (DCUSA). DNOs include the CCCM in their Statement of Methodology and Charges for Connection to the Distribution System (required under Standard Licence Condition 13 of the Licence).

The voltage rule limits the reinforcement cost that may be charged to the customer. Standard Licence Condition 14.20 places an obligation on the licensee (i.e. the DNO) to *"have regard to the principles that connection charges (a) will not generally take into account Distribution System reinforcement carried out at more than one voltage level above the voltage of the connection; ..."*. This principle is reflected in paragraph 1.30 of the CCCM, which says (under the heading 'Costs to be paid in full by us'): *"We will fully fund Reinforcement carried out greater than one voltage level above the voltage at the POC to the existing Distribution System."*

The HCC is also set out in the CCCM. The CCCM states at paragraph 1.15 (under the heading 'Costs to be paid in full by you'): *"For generation connections only, Reinforcement costs in excess of the high-cost project threshold of £200/kW shall be charged to you in full as a Connection Charge."*

¹ <https://www.ofgem.gov.uk/publications-and-updates/our-view-subject-consultation-whether-voltage-rule-should-take-precedence-over-high-cost-cap-distributed-generation-connections>

DNOs told us that, while the voltage rule and the HCC are sufficiently clear when considered in isolation, there is currently some uncertainty as to which rule should take precedence when a connection scheme triggers both rules.

We agree that the wording of the CCCM would benefit from modification, in order to clarify which rule should take precedence in the event that both rules were triggered. We consulted on the policy position that we would favour in such event.

Consultation

In our consultation letter, we said that we were minded to take the view that the voltage rule should take precedence over the HCC.

We noted that, as a result of changes to the price control framework, the HCC is now reflected only in the CCCM. The fourth distribution price control (DPCR4, 2005-2010) had introduced a DG incentive mechanism to incentivise DNOs to invest efficiently in reinforcement (funded through use of system charges) required to connect DG. This mechanism was retained for the next price control (DPCR5, 2010-2015). However, the current price control (RIIO-ED1, 2015-2023) removed this incentive. Now, actual expenditure on network reinforcement falls to be considered under the load-related expenditure re-opener.

We also noted that RIIO-ED1 amended other arrangements to ensure a more consistent approach to all customers (DG and demand). Allowing the HCC precedence over the voltage rule would widen the differences in treatment between DG and demand customers.

Finally, we explained that reinforcement of the distribution network at higher voltages is more likely to create capacity from which other customers may benefit. It would therefore be appropriate for the cost of this additional capacity to be spread across a wider base of customers.

Responses to our consultation

We received 14 responses to our consultation, from DNOs, generators, consultants and industry bodies.

Most of the responses supported our view that the voltage rule should take precedence over the HCC in circumstances where both rules are triggered. One DNO (WPD) explained that it already applied this precedence in its current approach.

Three DNOs (Scottish and Southern Electricity Power Distribution, UK Power Networks and Northern Powergrid) did not agree with our view. They raised a number of concerns, including the following points -

- The proposed approach would remove an existing tool currently used by some DNOs to encourage generators to consider more efficient and cost-effective business decisions. Reinforcement costs which are disproportionate to the average level of capital investment cost per kW provide a strong pricing signal. It would not benefit most customers to fund a proliferation of generation connections regardless of the impact on customer bills.
- A change to the approach could result in a substantial increase in the number of larger DG connections. These would previously have triggered the HCC so that the customer either would have paid for the additional reinforcement or would have decided not to proceed with the connection. A change would therefore lead to proportionately higher investment required for higher voltage networks.
- The proposed approach could affect the level of expenditure forecast to be funded by distribution customers in the DNOs' RIIO-ED1 business plans. Additional unforeseen expenditure that was not included in the current RIIO-ED1 price control could trigger

the load-related reopener mechanism, which is calculated for each DNO as a percentage of their average annual base revenue over RIIO-ED1. However, as a consequence of the structure of the reopener mechanism, reinforcement expenditure in one DNO area may be sufficient to trigger the reopener mechanism, while the same expenditure in another DNO area may not be sufficient.

- The Electricity (Connection Charges) Regulations (ECCR) enable customers who contribute towards the cost of a connection to be reimbursed by other customers who subsequently connect and use infrastructure that the first customer initially paid for. Under the existing ECCR, it might not always be possible to require subsequent connection customers to make payments for connections costs if the original costs were funded by all distribution customers.
- Smaller distributed generators could be connected, triggering substantial upstream investment paid for by all distribution customers, and larger (usually higher voltage) generators could subsequently utilise the additional capacity created without contributing to the cost of network reinforcement.
- The existing network is not designed to absorb demand and DG connections equally. Drivers for DG connections are different to those for demand connections. DG connection by its technical nature can drive network reinforcement where equivalent sized demand connection would not.²
- The argument in favour of consistent treatment is eroded because the HCC is applied to DG only, and not to demand connections.
- If such reinforcement is funded through Use of System (UoS) charges, it inconsistently apportions the costs because the structures of UoS charges for demand and generation are different.
- There may be a need to review and modify the current DG rules rather than consider the HCC in isolation. Justification for an industry-led review of the level of the HCC should be considered as part of a wider consideration of suitable arrangements to protect distribution customers from funding commercial generation connections.

Our assessment

We have discussed these concerns with DNOs to understand their basis. We have analysed existing connections data to see whether the impact of the proposed policy position on DNOs' reinforcement expenditure can be forecast more accurately. We have seen that there is the potential that, if all DNOs applied voltage rule precedence, this could result in significant additional network reinforcement investment being socialised (and thus paid for by all customers). On the data available, we have not been able to quantify the impact of the voltage rule taking precedence on the volume of new generation schemes that would be likely to proceed, nor on the additional costs that would be socialised.

We recognise that there may well be merit in an industry-led review of the HCC regime. However, we consider that it is a priority to remedy the current situation where DNOs interpret the same rules differently. A consistent approach across all DNOs is desirable to ensure a fair and efficient process for distributed generation. This consistency will allow greater certainty for new generation of the connection costs customers will face.

While a modification to the CCCM which specifies voltage rule precedence may affect the reinforcement expenditure included in RIIO-ED1 business plans for some DNOs, the load-related reopener mechanism provides scope for adjustment where the relevant criteria are met.

Following our assessment and consideration of the responses, we have decided to maintain our view that the voltage rule should take precedence over the HCC for all DG connections in circumstances where both rules are triggered.

² For example, nominal voltage on the local network is set high to accommodate demand connections, allowing little or no room for the voltage rise caused by generation. Networks were historically planned to accommodate single direction power flows over a range of different supply voltages.

Reasons for our view

Giving precedence to the voltage rule would support a consistent application of the current 'shallowish' connection charging policy. The HCC can play an important, but limited, role within this policy, by ensuring that the generator pays when reinforcement costs are proportionately higher than for demand customers in circumstances when these costs are incurred up to one voltage above the voltage of connection.

We also consider that the voltage rule can be given precedence while maintaining efficiency in the networks. We note that WPD already applies voltage rule precedence and has connected significant DG without a demonstrably negative effect on reinforcement costs. In the RIIO-ED1 price control, we decided to fast-track WPD as they demonstrated the most efficient costs against key deliverables.

While we agree that there are inherent differences between demand and generation customers, and that generation customers' connections will impact differently on the distribution networks, we consider that these differences are (or should be) considered in a DNO's network management.

We also agree that there may be some circumstances where reinforcement of the distribution network at higher voltages, creating additional capacity, will not benefit other customers due to the nature or location of that capacity. However, we consider that effective and efficient network management should limit the number of cases where this could occur. The Government is currently considering revising the ECCR. This may provide an opportunity for DNOs to clarify circumstances in which connection costs that were initially funded by DUoS customers could be recovered from subsequent connectees.

Finally, we recognise that the issue will need to be kept under review. We would expect DNOs to monitor any changes to the current connection patterns and identify situations where a generator may be attempting to circumvent the industry rules to avoid paying its fair share of the reinforcement costs. The industry may need to consider changes to the rules for connecting DG if it becomes obvious that potential DG connections are forcing investment decisions which are not necessarily in the best interests of DUoS customers.

In conclusion, we would welcome a modification to the CCCM which specified clearly that the voltage rule takes precedence over the HCC in circumstances where both rules were triggered.

Yours sincerely



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