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James Veaney
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Dear James,

Precedence of voltage rule or high cost cap for Distributed Generation connections

We appreciate the opportunity to respond to your open letter, 17 December 2014, and provide comments on whether precedence should be established between the High Cost Cap and the Voltage Rule for Distributed Generation connections. In your open letter we recognise that there already appears to be a disposition towards establishing the Voltage Rule as having precedent over the High Cost Cap. We suggest that it is premature to indicate a preference in this matter without further considering how such a decision will impact the DG Connections market and Duos customers.

In our discussions with Ofgem and as part of the wider industry we have consistently drawn attention to the unintentional consequences of establishing that the Voltage Rule has precedent over the High Cost Cap. We recognise that both rules were put in place to protect parties making new connections and the wider network customer base. Furthermore we accept that with the removal of the DG Incentive, introduced in DPCR 4, there may be justification to reconsider and modify the current rules. This should be undertaken with an eye to the wider impact on DG connections and in such a way as not to create an inappropriate advantage for one group of network users over another.

We would welcome further consideration of this issue by the industry and Ofgem rather than press ahead with a binary decision between the High Cost Cap and the Voltage rule.

SSEPD Key Issues

1. Fair allocation of costs

In your open letter the justification given for favouring the Voltage Rule over the High Cost Cap is the 'fairer allocation of costs'. We have and continue to support a regulatory structure which ensures new connections to the electricity network are not exposed to network costs beyond their own use connection assets for which there are potential benefits to the wider customer base (shallowish connection charging policy).

However, one unintentional consequence of establishing precedence of the Voltage Rule over the High Cost Cap is to create the scenario in particular areas of the network where connection of DG will necessitate reinforcement of higher voltage tiers for which there is little or no wider customer benefit. This is particularly true within the Scottish Hydro Electric Power Distribution (SHEPD) network where DG connections are concentrated in areas with very low levels of current or future demand.

The High Cost Cap was developed to ensure that where DG connections resulted in reinforcement which was disproportionate to the average level of capital investment cost per kW the impact on DUoS customers was limited by the cap. Simply demoting the role of the High Cost Cap in DG connections can result in investment which is not aligned with our obligation to operate an economic and efficiency network.

2. Perverse incentive

The development and application of the High Cost Cap signalled where it was uneconomic to develop small scale limited generation and encouraged creation of consortia or large, more efficient, projects. In essence it was not in the interest of customers to fund a proliferation of generation regardless of the impact on customer bills.

Setting the Voltage Rule ahead of the High Cost Cap creates the perverse incentive for small scale generation to trigger substantive higher voltage reinforcement at no additional cost. This additional work on the higher network tiers (predominately 132kV) will then permit connection of larger generation sites at no cost to the commercial developer. Currently the larger developer would in many instances have contributed to the connection costs.

This change in precedence could render the Voltage Rule less effective and risks increased proportion of 132kV connections from DG being funded by DUoS customers.

3. Consistent Treatment

The consultation also indicates that a perceived benefit from establishing precedence of the Voltage Rule over the High Cost Cap is 'for more consistent treatment' between customers. The differences in characteristics of demand and generation on a network lead to different effects and therefore different reinforcement consequences. These include the following.

- Generation by its nature drives reinforcement where equivalently sized demand will not. These factors include fault level contribution, starting and step change voltages and harmonics.
- The existing network is not designed to equally absorb demand and generation. Nominal voltage is set high to accommodate demand giving little or no room for the voltage rise provided by generation.
- The resultant general reinforcement will be funded through UoS charges, inconsistently apportioning the burden as charges are very different for demand and generation.
- Unlike demand, generation connections have proved to be uncertain, increasing the real risk of stranded assets.

The introduction of the Cap was not designed to create inconsistent treatment of different customers. Rather it was created to reflect the different impact of demand and generation connections on network costs and to provide a consistent relationship between the parties benefiting from network reinforcement and those contributing to it.

4. Immediate impact of change

The impact on reinforcement for island networks provides a good illustration of the unintended consequences of establishing the precedence of the Voltage Rule. Where currently the demand on island networks is well developed there is no requirement to undertake significant network reinforcement, and in particular, no requirement to invest in additional cable links to the mainland.

Allowing DG connections at LV which can in turn trigger the need for increased capacity in the island subsea cable connection (33kV) would lead to very significant network investment with little or no cost to the commercial entity. This provides material benefits for the new generation connection and very little benefits for the wider DUoS customer base.

There is justification for an industry review of the cap as part of a wider consideration on suitable arrangements to protect DUoS customers from funding commercial generation connections. This may include consideration of an increase in the cap from £200 / kW. We believe a wider review should incorporate empirical evidence allowing Ofgem to evaluate the impact on DUoS costs and consider whether the investment leads DNOs to operate an efficient and economic network.

Further more, such a fundamental change so soon after the conclusion of the RIIO-ED1 price control review introduces inconsistency between the established allowances and the investment challenge faced by a number of DNOs.

We would be happy to discuss any element of our response in more detail and would welcome this prior to further consultations.

Yours sincerely

Michael Ferguson
Regulation Manager, Networks