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Our ref

Your ref

Date

22nd September 2016

Dear Frances,

Charging arrangements for embedded generation

In response to your open letter on the above we agree that the scale of embedded benefits has reached a level where it is distorting the economic despatch of generating plant and acting as a strong signal to seek connection to the distribution network rather than the transmission network.

The rapid growth in the connection of generation to distribution networks has resulted in charging across the boundary between transmission and distribution becoming a more significant issue.

Specifically, in addition to the embedded benefits issue raised in your letter, the following issues are being encountered as a result of the differing charging arrangements between distribution and transmission;

- Where the connection of generation triggers transmission connection asset works these are charged directly to the DNO and recovered from generators in connection charges whereas transmission connection asset works for demand customers are recovered via exit charges and socialised.
- There is no 'one voltage level or above rule' which applies when DG triggers transmission works and there is ambiguity in the application of the second corner rule under the Electricity Connection Charging Regulations.
- Where transmission costs are passed onto DG customers, these customers face significant uncertainty over the transmission costs they will be liable for due to changes in the committed generation resulting in continued changes in the apportionment of the transmission costs between generators.
- At transmission level, a generator usually has rights to an unconstrained connection and is paid compensation if it is constrained off due to network constraints. At distribution level, the shallowish connection charge boundary pay

a proportion of any reinforcement required. The option to avoid these costs is to accept a constrained connection without compensation when constrained. Whilst this can be attractive, the amount and frequency of constraint is unlimited and hence presents a significant risk to generators.

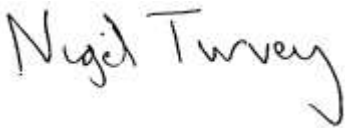
- Transmission has a strong locational signal in UoS, whereas at distribution level the main locational signal is in the connection charge. Where a DG customer connects at low cost, due to there either being spare capacity or accepting a flexible connection, the customer pays little connection charge, has no locational signal in DUoS charges and may well earn credits for each kWh produced whilst still imposing costs onto the system.

Also highlighted in your letter is the increasing growth of generation behind the meter. This is creating a similar embedded benefits issue at distribution level which will also need to be addressed as costs will end up being shared across those customers without generation behind the meter whilst some of those costs are driven by the generation behind the meter.

Given the above, whilst we understand the urgency of dealing with the embedded benefits issue, there is an increasing urgency to undertake a more fundamental review of both transmission and distribution charging to ensure incentives and costs recoveries are aligned across the transmission/distribution charging.

Should you wish to discuss this response further, please contact Nigel Turvey (nturvey@westernpower.co.uk).

Yours sincerely

A handwritten signature in black ink that reads "Nigel Turvey". The signature is written in a cursive, slightly slanted style.

NIGEL TURVEY
Design & Development Manager