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This is a response to the Ofgem open letter concerning charging arrangements for embedded generation that was issued on 29 July 2016.

I am writing this response on a personal basis but having had considerable consultancy and representational experience on the issue during my consultancy career - I have been distributed generation representative on a number of industry working groups that have studied, considered, and reported on this subject in the past. Probably the most significant was the Transmission Arrangements for Distributed Generation (TADG). In my view it would worthwhile considering this and other published work to properly establish an evidence base for any proposed change from the status quo.

At the evolution of the Electricity Market in 1989, it was decided that Embedded Generation (EG) should be treated as negative demand under the adopted transmission charging methodology. This was appropriate as the transmission system is sized and charged for on a capacity basis, and generally EG output is not carried on the transmission system, and so does not have to pay transmission generation charges. Providing it is operating over the correct peak period, it can also avoid suppliers incurring transmission demand charges.

EG is a key resource in the UK energy mix, and has a significant and growing role in future design and operation of the energy network. This was recognised and acknowledged in the design of the Electricity Market Reform and increasingly under the Smart Grid initiative. Recently, there have also been fundamental developments in developing and introducing generator distribution charging methodology which gives more accurate use of system signals over the location and operation of EG.

My general observations on the open letter is that it does not recognise the positive role that embedded generation can bring to the network instead referring to charging *distortions* when referring appropriate embedded benefits. These embedded benefits are proper long term charging signals in a mature energy market, not a free-riding distortion.

It is inappropriate to try and create a 'level playing field' between unlicensed sub 100MW generators connected to the distribution system and licensed transmission connected generators¹. Such EG does not have direct access to the wholesale electricity market, and as such, cannot generally provide wider ancillary services nor, as an example, do they have the rights to constraint payments that larger generators can access in paying for transmission charges.

The main, and in my view, correct charging principal for EG (and in future embedded storage), is to continue to treat it as negative demand unless there is demonstrated use of the transmission network through exporting Grid Supply Points at a distribution voltage level. Such treatment is entirely compatible with the concept and operation of smart grids as well as the EHV charging methodology at distribution level.

It seems that the concerns that Ofgem have, centre around the recent poor showing of transmission connected generation in the capacity market auctions, and that somehow this type of generation is 'more efficient' than smaller scale embedded generation that is over-rewarded for its output. It is of course appropriate that suitable emissions standards are not avoided by, say, smaller scale diesels units compared to larger scale plant, but it is a principle of connection and use of system charging methodology to date that it is technology and resource neutral. A move away from this concept at either a transmission or distribution level would be a fundamental market distortion in its own right.

Yours faithfully,

Stephen Andrews
Director

¹ This concept (Gross charging) was proposed by NGC under the TADG work and examined and rejected by all other industry participants