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To: andrew.self@ofgem.gov.uk
Cc: dena.barasi@ofgem.gov.uk

Dear Mr. Self,

Please see attached response to your open letter of 29 July 2016 regarding the ongoing review of charging arrangements for embedded generation.

NTR welcomes the opportunity to respond to this letter on what is a hugely important issue for the industry and will have a significant impact on the future of investment in embedded generation in the UK.

We look forward to further consultation on this issue.

Regards

Kieran Tubridy
Asset Manager, NTR

Introduction

NTR PLC ("NTR") is an Irish public limited company which has a long track record of investing in infrastructure across energy, waste, transport, water and telecoms sectors. NTR was one of the founding investors in Airtricity and held a 51% shareholding in that company prior to its sale in 2008.

NTR through "NTR Wind 1 LP" has raised equity finance to the value of €250 million to be invested in onshore wind projects the majority of which will be in the United Kingdom. These equity funds are matched by project debt finance, and a total €670 million of capital is expected to be invested. This equates to over 200MW of operational wind assets.

This document is a response to Ofgem's *Open letter: Charging arrangements for embedded generation*. The letter's main focus is supplier transmission use of system charges associated with embedded generation – the so-called 'Triad benefit'. It is NTR's view that Ofgem needs to consider the wider underlying principles behind transmission charging. NTR's main points are:

- Embedded generation is not the main driver for the increases seen in TNUoS demand residual tariff
- Charging for the transmission network should be cost-reflective and so users of the transmission network should pay for the network.
- The definition of "Peak" demand should be revaluated
- Suppliers should be incentivised to avoid using the transmission network during periods of peak demand.

It is important that Ofgem addresses the wider issues associated with transmission costs rather than focussing on one aspect which will not address the fundamental issues.

Background

The cost of building a transmission network is intrinsically linked to peak demand since the network is designed to meet demand during peak periods. Hence charging based on use at peak is deemed to be cost-reflective and provides an efficient economic signal to suppliers to reduce peak demand. This can be achieved through demand reduction or through embedded generation – the impact on the transmission network is the same in both cases.

For half-hourly metered demand, 'peak' is defined as the average across the three "Triad" half hours of highest transmission system demand each winter (separated from each other by at least ten days). A supplier's annual transmission network use of system (TNUoS) charges in respect of its half-hourly demand customers depend on the amount of electricity it is drawing from the transmission network during the Triad half hours. If the Supplier sources a proportion of this electricity from local embedded generators instead during these periods, then its liability for TNUoS charges is reduced. Hence the value of embedded generation to suppliers, is the avoided demand TNUoS charged during the Triad. This cost saving is typically shared between the generator and supplier under the relevant power purchase agreement, termed the 'Triad benefit'. The *Open letter: Charging arrangements for embedded generation* outlines that TNUoS demand residual tariff, which is the charge associated with the Triad benefit has been increasing in recent years. The average demand TNUoS demand residual tariff has increased from around £12.5/kW in 2005/6 to around £45/kW today.

Drivers of increasing TNUoS demand residual tariff

Currently there is a high level of transmission network expansion and reinforcement, as well as the inclusion of offshore wind transmission links in the transmission network. According to National Grid and DECC data these works are the largest driver in the increase in TNUoS demand residual tariff. National Grid are required to collect an increasing amount of revenue to cover the cost of this increasing asset base.

In recent years, the proportion of this overall revenue which is recovered from demand has increased owing to an EU cap on the level of transmission charges which can be levied directly on generation. At the same time, final consumption of electricity in GB has been falling as a result of the economic slowdown, de-industrialisation, and increased energy efficiency. Based on DECC data, final electricity consumption has fallen by around 13% from 2005/6.

Increased levels of embedded generation have reduced the TNUoS charging base – Triad demand and overall transmission network demand have both fallen by around 18% over this period. However according to National Grid and DECC data the increase in embedded generation is not a significant cause for the increase in TNUoS residual demand tariffs. Analysis of data published by NGC and DECC shows that the percentage rise in TNUoS residual demand tariffs since 2005 as a result of increased levels of embedded generation is around 20%. The real driver for the increases is the transmission network is increasing while final demand is falling.

Charging for the transmission network should be cost-reflective and so users of the transmission network should pay for the network. The users of the transmission network are both (transmission connected) generators and suppliers. Due to the EU cap on average transmission charges split between generation and demand has increased from and currently stands at around 17%:83%. In many other European countries, transmission costs are allocated 100% to demand. Some UK transmission-connected generators have argued that the jurisdictional difference distorts competition between UK and European generators trading across interconnectors, and so there may be benefits in aligning with Europe. In any event, transmission network costs imposed on generation will ultimately be borne by consumers.

The Triad period are used to charge for peak usage of the transmission system. The idea of charging for use at peak is based on the idea that the transmission network is sized to meet demand at peak. The cost of the network is determined by peak demand and it is appropriate to recover this cost from those suppliers using the network at times of peak demand. The current reality is that the cost of the network is increasing even while peak (and overall) demand is falling. Suppliers with peak demand that does not coincide with the peak of overall transmission system demand should retain the current advantage accruing from the fact that they manage their demand so as not to coincide with overall peak demand. As an addition to this charges could also be based on suppliers individual peak demands similar to the approach used for generation TNUoS charging.

It may also be worth considering the definition of 'peak'. For half-hourly metered demand this is currently defined as the three half-hours of highest demand over the winter (separated from each other by at least 10 days). Looking at alternative peak periods may be an option for Ofgem to consider. For example, non-half hourly metered demand is currently charged for use of system using a much wider definition of peak, covering 4pm to 7pm every day.

Conclusion

Increased embedded generation is not a significant driver of increasing transmission network use of system charges. Under a cost-reflective approach it is clearly inappropriate to charge suppliers for use of system in respect of electricity which they purchase from local embedded generators rather than from the transmission network. However it is worth re-examining the basis on which users are charged, particularly issues such as peak demand charging. It is important that Ofgem's review addresses these wider issues. If it focusses solely on the rules for Triad benefits then the fundamental problems will not be addressed, and could create further distortions rather than alleviate existing ones. Financial investors like NTR and large international banks have invested in UK projects on the basis that they will receive embedded benefits. If this benefit is removed then investor confidence will become even further eroded and investment decisions could be postponed or cancelled.

