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17 November 2010

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Dear Stuart

## RE: Project TransmiT: A Call for Evidence

DONG Energy welcomes Project TransmiT and believes it to be a timely review of the current connection and use of system charging methodologies. DONG Energy is one of the leading offshore wind farm developers in the UK with 308MW of operational wind farms, a further 653MW under construction and approximately 1.5GW under development. In addition, we are in the final stages of commissioning an 824MW CCGT plant in South Wales.

As noted in the Call for Evidence letter published on 22nd September 2010, the current charging methodologies have served their purpose in promoting the efficient use of the networks, and facilitating effective competition in generation and supply. However, the move towards low carbon generation necessarily means the shift from large, centrally located power stations to a smaller, often intermittent generation on the peripheries of the current network. As a consequence the existing methodologies are now acting as a barrier to entry for new generation. Given that this shift has, to a great extent, been driven by European and Government policy, it is important that this is recognised by industry and the relevant frameworks are amended accordingly.

Our recent experience of developing, constructing and operating power stations in the GB market has raised a number of concerns with the current cost-reflective approach taken by the current methodologies. These are explored further below but we also note that Renewables UK has submitted a detailed response to this Call for Evidence which we support.

The main issue for any new connection remains the level of reinforcement and associated security that a new User must provide to National Grid. The recent work by DECC as part of the Transmission Access Review has led to some improvement to the overall approach but there remains a disparity between the treatment of onshore generation and offshore, where the Final Sums Methodology is still applied to the offshore assets. We note that this currently falls outside the scope of Project TransmiT but we contend that it should be considered in the overall context of how transmission network development is undertaken.



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One of the current principles underlying transmission charging is that efficient economic signals are provided to Users to reflect the incremental costs of connecting them to the network. The aim being to provide clear signals to new generation and demand about where the most appropriate place, in view of the network, is to locate in order to minimise network investment costs. However, the Government has clearly set out its ambition for the UK to move to a low-carbon economy. In aiming for cost-reflective system charges, the methodology results in a distortion in the generation market: the signal to build renewable generation outweighs the signal to site it at technically optimal sites, so renewable projects can face very different treatment depending on their location. This is particularly the case for offshore generation.

Offshore wind site selection is primarily driven by offshore environmental and physical constraints, but is also constrained by the areas that have been offered for tender by The Crown Estate. Furthermore, the full TNUoS tariff payable by an offshore generator is not clearly known at the time of developing an offshore project. The main element of the tariff, the offshore element, is only realised after the OFTO has been appointed. At the latest, this can be some time after a project has commenced construction. As such locational signals arising from onshore TNUoS tariffs are a weak signal at best for offshore generation projects.

For onshore generation, there may be a higher degree of responsiveness to TNUoS signals. But this is largely confined to conventional, carbon-based generation which may have more flexibility in site selection. However, low carbon generation, such as onshore wind or nuclear is driven by location of the best resource or in response to the outcome of Strategic Environmental Assessments.

For all generation projects, once a decision has been made to develop a new project a programme of activities must be undertaken. This process can take 5 years or more from the initial work to carry out environmental studies and gain consent, to achieving a positive investment decision and finally constructing and commissioning a project. During this time, it is entirely possible to see significant changes in the TNUoS within a charging zone. This is not only driven by the possibility of the new project itself but also by the actions of other demand and generation connected to the network and changes to the charging methodology itself. The variability in tariffs has two consequences: firstly, it emphasises that the locational signal cannot be relied upon when making a long-term investment decision such as a power station with a 40-year asset life. And secondly, once operational, TNUoS charges are an ongoing risk to a generator. Changes in charges have a direct but unmanageable impact on cashflow as a generator cannot move in response to a change in TNUoS, it can only make a decision to mothball or close. The impact of tariff changes can be significant: a doubling of the wider TNUoS tariff can result in a 10% fall in the NPV of an offshore wind farm. Changes of that magnitude do occur, and result in significant uncertainty for project developers.

Project TransmiT should give serious consideration to whether or not it is sustainable to continue to 'signal' incremental costs through locational tariffs given that external drivers, and in particular Government policy, are so much stronger. The current system is arguably penalising generators who are responding to a wider imperative for new, low carbon generation. It is vital that the charging regime is consistent with the Government's overall aim of reducing carbon emissions.

DONG Energy recommends that Project TransmiT also considers the treatment of embedded generators and the interaction of distribution and transmission charges. In the past it has been accepted that small, embedded generation has an inherent value to local networks and this value has, in part, been realised through the embedded benefits received. However, with the introduction of BETTA and later classification of 132kV as transmission for offshore generation, these benefits are gradually being eroded. Furthermore, with the move to 'cost-reflective' charging and introduction of generation DUoS charges there is now the potential for a situation to arise where it becomes preferable for small generators to connect directly to the transmission system.

Project TransmiT should also take this opportunity to consider the treatment of offshore transmission in the charging methodologies. There are two areas where immediate consideration is necessary: the offshore transmission tariffs and the treatment of HVDC cables. Both of these issues are fully explored within the Renewable UK submission but DONG Energy are keen to draw attention to the, perhaps unintended, consequence of offshore wind effectively subsidising onshore generation due to the dominance of the offshore locational charge. Further, the treatment of HVDC cables must also be considered in the context of the use and operation of the assets which is more in control of the TSO than AC assets. With the growth of HVDC, both on an offshore, consideration must be given to the extent of the cost imposed by Users and the management of the system by the TSO in establishing use of system charges.

We would also recommend that Project TransmiT consider the treatment of intermittent generation in charging. There are two aspects to this. First of all, Project TransmiT should consider a system where charges are based on energy volumes rather than total entry capacity as the TEC approach could be a disadvantage to intermittent generators with low load factors. Further, in the current calculation of TNUoS charges the scaling factor applied to all generation is to approximate the load factor. This is derived by a simplistic calculation, dividing total demand by total generation, meaning the scaling factor will generally be much higher than the actual load factor of intermittent generation. As with the offshore tarrifs, this again favours conventional carbon-based plant, as compared to low-carbon intermittent generation.

Moreover, TNUoS for existing offshore generation should not be affected by new generation connecting to the same grid entry point. If this occurs, the impact on offshore generation would be much larger compare to the current

onshore regulation, due to the offshore transmission system being smaller and at an early stage of development.

Finally, as acknowledged by the Call for Evidence, there is a need to ensure the application of charging in GB can accommodate cross-European and other market and regulatory developments. In particular, we consider the treatment of existing and future interconnectors as fundamental to any regime that is implemented.

Yours sincerely
DONG Energy

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