

Enduring Transmission Charging Arrangements for Distributed Generation

1. Introduction

Ofgem has invited views on whether the existing charging and contractual arrangements for distributed generation are appropriate on an enduring basis. This submission provides a summary response to those issues raised in the September 2005 document and suggests appropriate next steps.

2. The Need for Review

At one time, significant generation was connected to the England and Wales distribution networks at 132 kV level. The networks themselves were designed and operated to accommodate this generation as an integral part of the overall electricity system. As individual generator sizes increased, connection at 275 kV and 400 kV became a requirement in order to ensure that generation and transmission capability were appropriately matched. With the retirement of 132 kV connected generation, distribution network development has, for a considerable period of time, been primarily focused on optimizing a passive network which transfers bulk power from the transmission system, via GSPs, and distributing this to consumers. Network design and development has effectively excluded the requirements of distributed generation.

Due to the historical development of distribution networks on a regional basis, there are significant differences in the design and configuration of individual networks. This is particularly the case in Scotland, where the implementation of BETTA has led to considerable changes in the approach to connecting and charging distributed generation. These in turn have highlighted the need for a thorough review of the treatment of Scottish distributed generation. Unlike the national transmission system, the addition of distributed generation into these networks needs to be approached on a network specific basis, but with a consistent and uniform approach when transmission/distribution interface issues are addressed.

The current arrangements regarding charging and contractual arrangements for distributed generation reflect the incremental approach which has been taken to the increase in distribution network connected generation. The process has primarily been one of attempting to accommodate distributed generation capacity by amendments to the existing structure, rather than addressing the overall suitability of arrangements, from first principles. Given the requirements and timetable imposed by BETTA, it is understandable that transitional arrangements were necessary. Nonetheless, major concerns were raised by the industry regarding the treatment of smaller/embedded generators under these arrangements. These concerns still remain and the current review needs to ensure that these are properly addressed. There is likely to be significant further capacity wishing to connect at the distribution level (both renewables and other technologies) and a coherent framework needs to be put in place in order to more effectively facilitate this capacity and deal with the challenges of managing active distribution networks in the future.

Options for an Enduring Framework for Distributed Generation

An enduring framework needs to recognize the likely future path of development of the distribution networks. Therefore any proposals for an enduring charging framework need to recognize the interaction with wider distribution network issues. With regard to the options that Ofgem has identified in the discussion document, we have the following comments:

Option 1 - Do nothing, is unacceptable, given the anomalies and difficulties facing distributed generation under the current arrangements.

Option 2 - De-energize plant that spills, is unacceptable. Generation capacity should have access to the relevant distribution network and transmission system on a basis determined by technical considerations (including security and quality of supply standards) alone, and the relevant network and grid capacities should be in place to allow full and flexible output. De-energization solves none of the identified shortfalls with the current arrangements and would only serve to increase risk and would act as a major deterrent to otherwise viable projects.

Option 3 - Amendments to the charging model, does not provide a comprehensive solution to the issues raised. As noted, without an accompanying change to the charging base, it merely serves to re-allocate costs amongst existing users and leaves distributed generators facing the same problems which currently exist.

Option 4 - extending the DCLF ICRP model to parts of the distribution network, raises many problematic issues and is a disproportionate response to the questions raised. As noted above, individual distribution networks vary considerably in their design and operation and it is difficult to see how “grouping” parts of the distribution network with transmission for this purpose could lead to anything other than additional complexity. The distribution networks would still be treated as separate coherent entities for virtually all other purposes, as they should be, and this proposal appears anomalous.

Option 5 - Amend use of size definitions would, as suggested in the document, not address the issues, but move the boundary at which they became relevant. It does not address identified concerns with respect to contractual arrangements with NGC, for those generators who would be subject to the arrangements.

Option 6 - Creating a consistent liability for charges, involves a significant change from current charging principles, is disproportionate and again does not properly recognize the varying geographic element due to the different distribution network configurations in the U.K.

Option 7 – Agency Models

Ofgem notes that at present, a distributed generator has a number of contractual relationships, including with DNOs and, in some circumstances, NGC. Managing these relationships may be onerous for certain distributed generators and subject to considerable information asymmetry between the parties, leading to unnecessary difficulties and sub-optimal outcomes. We therefore concur that there is merit in exploring an agency approach to better manage these relationships on behalf of distributed

generators, *provided that appropriate incentives are put on those performing the Agency role, together with safeguards for those generators who may choose this arrangement.* The establishment of any Agency function should have as its primary objective, the more efficient and effective facilitation of distributed generation, and should be judged against this criteria.

Of the three approaches outlined in the document, we would support further development of the DNO agency model. The primary issue to be dealt with, by any changes to the charging arrangements for distributed generation, is that of the interface between the transmission and distribution networks. This is best addressed by the DNO, who has the fullest information on the totality of power flows on its network and its interaction with the transmission system, in both planning and operational timescales.

The establishment of an independent Distribution System Operator appears to be a disproportionate response to the issues. Concerns over independence and impartiality of DNOs should be capable of being addressed via appropriate incentives, safeguards and processes.

Next Steps in the Process

We believe that the approach taken by Ofgem is appropriate, where the September 2005 discussion document is intended to inform and stimulate the debate. The proposed document summarizing responses should be published as early as possible in 2006, in order to allow sufficient time for detailed consideration of, and response to, Ofgem's provisional thoughts on the way forward.