

# **Network Operator Reporting on Facilitation of Competition**

**Final Version**

21 November 2000

## 1 Statement of the Question

- 1.1 It is likely that plant embedded in distribution networks will contribute a larger proportion of total national generation in future, given the Government's policy objectives for renewables plant and CHP and the wish among developers to introduce various types of generating plant in distribution networks.
- 1.2 Set against this background, and taking into account the new regulatory structure under which distribution companies will have to facilitate competition in generation and supply across their networks, this paper discusses the adequacy of the present arrangements under which the National Grid Company (NGC) and Distribution Companies presently report publicly, at regular intervals, how they have facilitated competition in generation.

## 2 Background – The Current Situation

- 2.1 Neither NGC nor Distribution Companies (hereafter referred to as Distribution Network Operators, DNOs) are currently obliged to make a separate regular public report on how they have facilitated competition in generation. However, the following paragraphs set out the existing obligations and describe the activities associated with them, many of which do include reporting.
- 2.2 Under the Electricity Act 1989, it is the duty of the holder of a licence to transmit electricity to “facilitate competition in the supply and generation of electricity”. The Utilities Act places a similar duty on DNOs and removes a condition specific to Scotland. In this way there is a uniform duty to facilitate competition in generation across Great Britain.
- 2.3 The Public Electricity Supplier (PES) Licence requires each DNO to maintain a distribution code which is publicly available and “which is designed so as to facilitate competition in the generation and supply of electricity”. The licence also requires DNOs to provide network data on request to assist developers with siting and sizing of their projects.
- 2.4 The Distribution Code is governed by a review panel that meets regularly and includes a wide cross section of users including embedded generation representatives. This provides direct feedback from users to DNOs and is a useful channel for the exchange of information on issues affecting users. The Distribution Codes state guidelines and requirements on both parties for planning and operating embedded generation as an integrated part of a distribution network
- 2.5 Transmission Licences require the holder to maintain a grid code also “designed so as to facilitate competition in the generation and supply of electricity”. A Grid Code Review Panel governs these documents. The licence also requires the preparation of a Seven Year Statement (SYS) showing circuit capacity, forecast power flows and loading on each part of the transmission system and fault levels for each transmission node, together with:

- a. such further information as shall be reasonably necessary to enable any person seeking use of system to identify and evaluate the opportunities available when connecting and making use of such system; and
  - b. a commentary prepared by the licensee indicating the licensee's views as to those parts of the licensee's system most suited to new connections and transport of further quantities of electricity.
- 2.6 NGC and DNOs are obliged under their Licences to make a non-discriminatory offer of terms for connection to the network within 3 months. Non-discriminatory offers by the companies for the use of their networks by an embedded customer must be made within 28 days. Should the companies fail to meet these timescales, or if the terms offered are unacceptable, the customer may refer the offer to Ofgem who report the findings of such referrals publicly. In this way there is public reporting should the companies fail to facilitate competition by making suitable connection or use of system offers.
- 2.7 For NGC, in cases where customers accept the offered terms but access to the transmission system is substantially delayed pending reinforcement works, the absence of an opportunity to connect to the transmission system is reported in their Seven Year Statement.
- 2.8 The DNOs and NGC also publish statements, as required by their Licences, in a form approved by the Director-General setting out the basis under which charges are made for connections (including generator connections) to the Distribution & Transmission system.
- 2.9 The Transmission User Group (TUG) is established under the Master Connection and Use of System Agreement (MCUSA) as a forum for discussing transmission related issues. These issues include transmission charging principles and arrangements for the provision of ancillary services. NGC publishes opportunities concerning the provision of ancillary services on its web site and, in some cases, in the SYS. As part of the NETA process, the Connection and Use of System Code (CUSC) will replace the MCUSA and new governance arrangements will be established.
- 2.10 There is a clause (2.5.1) in the MCUSA which requires DNOs to ensure that, prior to energising a connection to an embedded generator, the generator has entered into an agreement with NGC where required. There is currently disagreement on the interpretation of this clause.
- 2.11 Each year NGC seeks feedback from customers on the contents of the SYS and these are discussed with Ofgem and taken into account where possible. Through this process the SYS now contains information beyond the scope set out in the Licence. Also, some information, such as details on generation that has entered Connection and Use of System agreements with NGC, are published quarterly rather than annually. In this way, the SYS provides a regular public report on how new entry to the electricity market via the transmission system has been facilitated.
- 2.12 On a voluntary basis, DNOs provide details to NGC for publication in the SYS of non-centrally dispatched embedded generation within their networks that have an installed capacity larger than 5MW. This information includes an indication of generation location to the nearest Grid Supply Point, the maximum export capability to the distribution
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network and the contribution assumed by the DNOs to be available at time of NGC peak (used by NGC for the purposes of designing network infrastructure). While in the past, the data concerning embedded independent generation has not been comprehensive; it has improved year on year and is now provided by all DNOs.

- 2.13 DNOs and NGC also supply ad-hoc information to Ofgem and other government bodies on the number of generators connected to the companies' networks and (for example) the spread of generator fuel types. The size range of such connections varies considerably – including a relatively large number of small embedded generation projects. At each price review the overall level of connections is reported for the current period and projections are made for the next price review period.
- 2.14 NGC and DNOs are obliged to safeguard certain confidential customer data. For example, for this reason it is not possible to publish energy requirements or load factors of individual customers, although it may be possible to provide meaningful information in the form of a generic answer.

### **3 Issues and Options**

- 3.1 Both network operators and generation customers within the group have described and commented on many aspects associated with the activities needed to facilitate competition rather than solely the manner in which it is reported. While this is wider than the original scope set for this paper, it reflects the view of the group that establishing effective information flows, making understandable processes for market entry and transparent terms for connection and use of system are all key in demonstrating that competition is being actively facilitated.
- 3.2 On this basis, options for improving the facilitation of competition cover areas also addressed in other papers, in particular, those covered by the Provision of Information, Charging and Technical Issues. However, the following issues are particularly relevant to this paper:
- a) The group believes that the current regulatory framework for distribution businesses concerning new generation connections has meant that activities that may facilitate competition have tended to be treated as administrative costs to be minimised rather than opportunities for business development. A key issue, therefore, is how appropriate regulatory mechanisms on distribution companies can be established.
  - b) The key information required to facilitate competition relates to the signalling of the presence of opportunities for connection and use of the networks and the extent to which other market participants may already be pursuing them. There is an issue concerning the appropriate form of this information but the group is of the view that the current position can be improved.
  - c) An important issue in facilitating competition in generation is the exchange of information between NGC and DNOs to permit better signalling of opportunities to

embedded generators who may wish to provide ancillary services and also to co-ordinate the timing of developments if transmission reinforcements are also required.

- d) The group believes there are considerable benefits that can be brought to generators and other customers by standardising the form in which information is provided on opportunities, the processes for establishing connections and the associated commercial arrangements. However, there is an issue concerning how far it is possible to establish such standardisation between NGC and DNOs and between individual DNOs given the differences between businesses.

## 4 Recommendations

- 4.1 Given the conclusions of the debate associated with this paper, no actions specifically associated with changing the current reporting of facilitation of competition have been identified. It is expected that the information that emerges from activities associated with facilitating competition in practice, whether regular or by exception, will be sufficient to identify the effectiveness of actions to facilitate competition.
  - 4.2 The possible actions related to improving how competition in generation is facilitated are:-
    - a. Consider how the regulatory mechanisms for DNOs could be modified with respect to the connection and treatment of embedded generation.
    - b. Review existing generic industry documentation for information that assists potential new connectees wherever they wish to connect. Such advice should highlight differences between networks, set out the source of opportunity information, and compare typical costs of distribution and transmission connections for different size connections. It is thought that 'A Technical Guide to Connection of Embedded Generators to the Distribution Network' published by ETSU, would be suitable for this and DNOs would wish to co-operate with the continuous updating of the document. NGC would also wish to contribute information on the opportunities for the provision grid connections and ancillary services.
    - c. Consider the appropriate form for a commercial forum in which distribution customers (i.e. generators, suppliers and supply customers) can meet distribution company representatives (the group has no preconceptions as to its nature);
    - d. Develop guidelines on the provision of information to identify what information is most valuable to embedded generation project developers. (This action is closely associated with another in the paper concerning the provision of information).
    - e. Clarify the arrangements by which information on embedded generation developments is provided to NGC by DNOs and also clarify the arrangements by
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which it is ensured that all network developments necessary to accommodate such developments have been completed prior to energisation.

## **5 Contributors to the Report**

This paper has been compiled by the following DTI/Ofgem embedded generation working group members:

Lewis Dale and David Porter, acting as rapporteurs, with Philip Baker acting as an observer.

Contributions were received from David Porter, Steve Johnson, Malcolm Taylor, Stephen Andrews and Catherine Mitchell (on behalf of generators), Ian Tait, Mike Kay and Alan Creighton (on behalf of DNOs) and Lewis Dale (on behalf of NGC).

Review comments were provided at DTI/Ofgem Embedded Generation Working Group Meetings.

## 6 Annexes – Individual Contributors' Points of View

The following sections set out issues and views that individual contributors representing network operators, embedded generators, wish Ofgem and HMG to take into account in reaching its conclusions. Comments from representatives of customers and suppliers have been taken into account in the preparation of this paper but they have chosen not to include any specific views in this section.

### 6.1 Network Operators

- 6.1.1 NGC seeks to inform current and potential future customers of the opportunities for connecting to and using the transmission system in the SYS. It also provides information to potential providers of ancillary services through the SYS and other communication channels. To make the SYS as useful as possible, NGC seeks and tries to meet the requests of its customers on the form and content of the document. Given this approach, NGC believes that its current reporting of how it has facilitated competition in generation is adequate as far as its own network operations are concerned but acknowledges that improved interfacing arrangements with DNOs and other agents could identify further opportunities for embedded generation.
- 6.1.2 NGC considers that it has successfully facilitated competition in generation by providing open access, non-discriminatory connections and use of system terms and transmission charging methodologies. Given the impacts that embedded generation may have on the transmission system, NGC has sought information on such developments and believes it should have the opportunity to complete any necessary works prior to energisation of such generators.
- 6.1.3 DNOs are of the view that the existing arrangements provide a transparent and non-discriminatory process which facilitates competition in generation while ensuring that other categories of user are not disadvantaged. The Distribution Code and the review forum has proved a useful mechanism by which users and Distributors can work together to facilitate competition in generation and supply.
- 6.1.4 Proposed new Distribution Licences have been the subject of a recent Ofgem consultation. A new condition (Condition 30) within the draft licence relates to DNO's providing high level information which will assist users wishing to connect and thus provide similar levels of assistance to generators as is currently provided in transmission licensees' Seven Year Statements.
- 6.1.5 Information on the general levels of generation connection to the distribution system is provided as part of the price review process and, where requested, on an ad-hoc basis to the regulator and government. It is difficult to see what benefit there would be to generation
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users of additional reporting and, hence, how the associated costs (which ultimately are passed to all customers) would be justified.

- 6.1.6 Provided appropriate rules are established which result in a “level playing field” for all classes of user, DNOs do not see a requirement to report publicly on how they have facilitated competition for a specific class of user. It could be argued that to do so would in itself suggest discrimination between users. DNOs are of the view that working pro-actively with embedded generators to ensure that the level playing field is maintained will demonstrable a practical approach to facilitating competition.

## **6.2 Generators**

- 6.2.1 There are no financial incentives for DNOs to facilitate generation connections either from rate of return (connection) or from regulated (use of system) income. The NGC approach is more proactive in this area both as the result of a wish to grow its business and because of different interpretation of facilitation of competition to distribution operators.
- 6.2.2 NGC is required to produce a Seven Year Statement. The document is very useful for the whole industry and a useful model when considering the requirements for distribution systems. (This issue is dealt with in greater detail in the work stream paper on ‘Provision of Information’.) There is no requirement for information in the form of a Seven Year Statement or incentive on distributors to produce public information to facilitate competition as any costs (plus a return?) for generator enquiries are recovered directly from individual applicants. Cost pass through discourages the efficient handling of connection requests.
- 6.2.3 Generators have presented proposals for facilitating the connection of embedded generation to the Distribution Code Review Panel (DCRP). The presentation received a sympathetic hearing but progress has been slow since then. A number of factors make it difficult to use the DCRP:
- The focus of the DCRP is technical and members are unwilling to discuss commercial issues as these are seen as specific to individual distribution companies.
  - There is no financial incentive on DNOs to facilitate competition so any additional effort is characterised as an increased overhead.
  - The Distribution Code is a technical document and is seen by users as the distributor equivalent of the Grid Code. NGC do not highlight the Grid Code as the means for demonstrating ‘facilitation of competition’.
- 6.2.4 There is no user forum for the development of commercial arrangements for the distribution systems. The Transmission Users Group (TUG) provides a forum for transmission users. The TUG has found it difficult to deal with distribution interface issues and once again gives a sympathetic hearing to generators but is unable to act. The access
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and transparency that the TUG provides are an element in the overall contribution of NGC to facilitating competition on the transmission system.

- 6.2.5 The current distributor information available from distributors often requires expert assistance to achieve a satisfactory outcome – especially in the calculation of deep entry charges and in resolving conditions of connection. This restricts access to those that have the necessary expertise ‘in house’ or can pay for independent consultants. Support from distributors needs to be stronger than that available from NGC – not weaker as it is at present.
- 6.2.6 Deep entry charging for distribution connections does not facilitate competition (other work streams have dealt with this issue). The bulk of NGC charges are based on published tables and ‘entry’ charges are based on ‘shallow connection’ charging methods.
- 6.2.7 The approach of different distributors to potential connectees varies significantly.
- 6.2.8 There is no readily available list of embedded plants. There is no readily available (and free at the point of supply) list of low cost connection opportunities on the distribution systems.