Flexible Connections Offered

Where a customer applies for a given level of load (generation or demand) that cannot be connected without significant cost, they may wish to consider managed connections. We will work with customers to produce a managed connection that fits their needs. These are connections where some form of load management is adopted that avoids breaching a constraint on the network. Constraints are normally either thermal or voltage related with larger connections being more often associated with the extra-high voltage system and the latter more often associated with the low voltage system.

Typical managed schemes would address single constraints at a single point on the network, constraints at certain times of year, week or day, or constraints which arise under outage conditions.

We currently have over 700MW of generation on managed connections, both thermal and voltage related, and many managed connections for load have been installed over decades. We are also continuing to expand our offerings including a wider network management system currently in development which is capable of the management of multiple customers and multiple constraints. It is likely that, while this wider network management system would be considered on its merits for all customers, it will be more attractive to larger capacity customer connections due to the relatively fixed communications requirements, and therefore fixed costs, involved per participant.

We would also encourage customers to consider, and are willing to facilitate sessions to discuss options for, consortia or joint approaches with other developers in the same area for two reasons. Firstly this may spread any reinforcement costs more widely, and secondly a clearer understanding of the overall requirements, including any diversity or offsetting, may allow us to reduce the total reinforcement needed.

Flexible connections will be highly attractive and very suitable for some customers and not for others due to the risks and benefits involved. Both the benefits and risks of a flexible connection will be specific to a given development, however the following considerations generally apply.

The benefits will normally be associated with reduction in the capacity of assets required on the distribution or transmission system to cater for the development. Where these are sole use assets the benefit to the developer will be in cost terms, but not necessarily lead times. Where these are existing assets subject to deep reinforcement, the benefit will be in lead times but not necessarily cost. Where these are shared assets, then both lead time and cost benefits may be seen by the developer.

The main risks fall in two areas. First, there is likely to be some need to reduce output from or import to the development at some times. The degree of constraint and the frequency will be specific to the development and may change over time as the generality of customers change their use of the energy and the electricity networks. It should be noted that a customer with local storage or a demand customer with standby generation may not be affected by the constraint as it is a power constraint not an energy constraint. The second risk is that a customer that later decides to upgrade their connection from the flexible connection to a standard connection (note the earlier comment that constraints may change over time) may find that the electrical network has changed since their original application. These changes may of course be either to their benefit or detriment, but this point should be borne in mind.

Further Information Available From

http://www.northernpowergrid.com/get-connected/#!/
http://www.northernpowergrid.com/generation-availability-map
http://www.yourpowergridplan.com/#!innovation
http://www.yourpowergridplan.com/#/low_carbon_economy
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