Interested Parties

Promoting choice and value for all customers

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Dear Colleagues,

Connecting the Islands of Scotland

The islands of Scotland benefit from some of Europe's largest wind and marine resources. These resources have prompted many renewable generation developers to seek to locate on Orkney, Shetland and the Western Isles. However, these remote areas currently have no connections to the high voltage transmission system for the bulk transfer of power and the potential high cost of such connections may make the development of Island renewable generation uneconomic.

If power from these potentially large sources of renewable generation is to be delivered to consumers and to contribute towards the Government and Scottish Executive's targets for the proportion of power sourced from renewable generation, there is a need to design a regulatory framework that not only allows connections to the existing transmission network to be built, but also seeks to ensure that fit for purpose connections can be developed at the lowest possible cost.

In our recent transmission price control review (TPCR) we provided for very significant increases in transmission investment. We also noted that, because of the very large predicted investment needs, we would consider how to provide for potential investment in connections to the Scottish Islands through a separate consultation process. This open letter is the first step in that process. Further consultation will take place during 2007 and the process should ultimately lead to a regulatory framework that allows connections to the Scottish islands to be constructed (assuming there remains a demand for this transmission capacity).

This letter sets out our high level thinking on the options which are available for regulating connections to the islands of Scotland. There are few precedents for constructing connections of this nature in the United Kingdom and we consider that the connections raise a number of challenges. As discussed later in this letter, we think there is a balance to be struck between making sure developers' requirements are met, allowing them to connect projects as economically as possible and making sure that customers do not pay any more than necessary for the connections to be built. Given these challenges, we think it is necessary to ask whether a different regulatory approach to that which has been used to date onshore should be adopted.

Given the many similarities between the Scottish Island connections and those for offshore transmission, we would like to point interested parties to Ofgem's offshore

transmission scoping document of March 2007[1]. This document sets out a competitive approach for tendering of offshore transmission connections, allowing developers to come forward with low cost, fit for purpose proposals.

Background

There is a single transmission system for the whole of GB, which transfers electricity in bulk at high voltage from generators to large industrial users and to local distribution networks. An efficient transmission network helps provide consumers and other network users with a reliable means of energy transportation.

Generators compete to sell their energy to suppliers and in turn suppliers compete to sell the energy to end customers. In recent years, increasing numbers of renewable energy generators have sought to connect to the transmission network. Due to the greater wind resources in remote areas, many of these connection requests have been in areas where there are few transmission assets. This is particularly true in the case of the islands of Scotland.

The transmission (and distribution) networks provide the link between the competitive generation and supply markets. Due to the large costs and meshed nature of these networks it would not be possible for them to be provided by a company operating in a competitive environment. Therefore transmission and distribution networks need to be regulated. Regulation aims to recreate the conditions which a firm which has no competitors would face were it operating in a competitive market. Regulation is therefore a 'second-best' option when compared to competition.

Three companies currently own transmission assets. Scottish Hydro Electric Transmission (SHETL) owns the transmission network in Northern Scotland, SP Transmission (SPTL) owns the assets in Southern Scotland and National Grid Electricity Transmission (NGET) owns the assets in England and Wales. Each of these companies is termed a transmission asset owner (TO). NGET also has a role in operating the GB transmission system. The system operator (SO) is responsible for balancing demand and generation in real time and co-ordinating the activities of the TOs.

Ofgem regulates each of these companies. In the case of TOs, we assess each company's business plans and set a level of revenue, usually for a period of five years, which will fund necessary maintenance, upgrades and new investments in the network. This level represents the costs that an efficient and economic operator would incur and takes into account efficiency savings that we think they should make. The TOs are able to recover this revenue through cost-reflective charges to network users.

Ofgem's primary duty is to protect the interests of consumers. We are required to do this through competition where possible. In addition to our primary duty, we must also have regard to the impact of our actions on a number of wider statutory duties, including the environment, sustainable development, security of supply and on those in fuel poverty.

Delays in achieving connection

There has been a surge in the demand for transmission connections in recent years (over 150 projects, totalling over 13GW of capacity have been given connection offers to connect to/ use the GB transmission system). A significant amount of this demand has come from renewable generation, much of which is in locations where there is little or no

[1] http://www.ofgem.gov.uk/Networks/Trans/Offshore/ConsultationDecisionsResponses/Documents1/070330_2ndOffshoreScopingDoc_final_am.pdf

transmission capacity. A large percentage has been concentrated in Scotland. There needs to be a series of major upgrades to the transmission network in Scotland and Northern England if these demands are to be met.

Ofgem has funded a substantially higher level of investment in the GB electricity transmission network as part of the recent Transmission Price Control Review (TPCR) settlement and the earlier Transmission Investment in Renewable Generation (TIRG) project than has been the case under previous controls. A significant proportion of this investment has been identified to accommodate the connection of new generation.

However, while this investment will ensure that transmission access can be provided for all generation wishing to obtain a transmission connection at some point, it will practically take several years to complete and, in the meantime, certain renewable generators may be restricted from gaining access to the network due to the volume of generation seeking access to remote areas of the network that have capacity constraints. Ofgem, Dti and NGET are separately taking forward work to seek to minimise the delays to connections.

Consideration of Scottish Island Connections to date

We first considered the possibility of connections to the Scottish islands in 2003. Our TIRG project assessed the need for transmission upgrades based on an assessment of expected volumes of generation, investment costs and constraint costs. We concluded that there was not a need to fund investment to the Islands at the time of TIRG and we concluded that it may be appropriate to consider these issues at the next TPCR. In the final TIRG report we stated: "Ofgem has also considered the possibility of participants undertaking transmission network extensions independently of the transmission licensee."

We considered island connections at each stage of our consultation process on the price control to apply from April 2007 to 2012. We introduced automatic mechanisms so that investment could reflect the demands of network users (revenue drivers), but our initial proposals document noted that: "revenue drivers will not be designed to handle very large extensions to the transmission network (such as to connect Shetland, Orkney or the Western Isles) because of the considerable uncertainties over the technology used and design specifications."

In that document we identified two possible ways of handling the issue. First, it is possible to fund the island connections by re-opening the price control of SHETL when further information became available on the demand for capacity, likely design and cost. Second, the island connections could be funded by opening up the provision of such transmission links to alternative providers.

We confirmed in our final proposals that we remain of the view that there is scope within the existing regulatory framework to facilitate competition in such transmission links - and confirmed we would be undertaking further development work on such options outside the TPCR process. We also noted that we visited Shetland, Orkney, and the Western Isles to meet with stakeholders and discuss transmission issues. We noted that the feedback we received supported continuing this development work.

Developing a regulatory regime

Ofgem is committed to designing a regulatory framework which balances the requirements of developers, customers and other interested parties. In coming to a decision on the appropriate regulatory option, we will be mindful of our primary duty to protect the interests of consumers and our wider duties to, amongst other things, promoting sustainable development and the environment.

Given our duty to promote competition where possible and the inefficiencies of monopoly relative to competition, we do not consider that it would be appropriate to oblige a monopoly provider to construct such challenging projects without fully considering alternative options. We consider that there may be scope for competition to be introduced into the provision of transmission assets. A competitive approach could be expected to provide greater scope for innovation, both in financial structures and technological choices, be better able to reflect the preferences of individual (or groups of) generation developers, increasing flexibility over, for example, possible connection points, and could be expected to ensure that connections are constructed at least cost, effective.

We are also aware that a connection to the transmission network may deliver wider benefits to potential developers and other stakeholders, such as local development agencies, local councils and/or the Scottish Executive, and may also create an opportunity for associated business benefits e.g. development of telecommunication networks. The creation of a regulatory regime which allows such benefits to be recognised and allows stakeholders to consider whether there is a role for them to play in, for example, taking on a proportion of the risk arising from the construction of island connections, could be helpful in reducing overall costs and making these projects a reality.

Options

There are a range of regulatory options which could be applied to the Scottish Islands connections. At this stage we have not sought to develop detailed options or identify the specifics of each option; though we acknowledge that significant work will be required to fully develop a coherent regulatory approach. We have sought to identify the key characteristics of three approaches, from both a potential TO's and a generator's perspective. Respondents' views on the practicality of these options, and suggestions on other approaches which might be practicable, will determine the future course of this consultation process.

a) The status quo

SHETL's existing licensed area includes the islands of Scotland. Applying the existing regulatory framework would place an obligation on SHETL to offer terms for connection to NGET in response to a request for connection by any generator on an island as it does in the rest of its licensed area.

This is the least change option and would involve relatively minor changes to existing regulatory frameworks. We would consider any cost-estimate put forward by SHETL and consider the Transmission Network Use of System (TNUoS) charge which would be produced as a result. Assuming that there was likely to be interest in connecting generation in the islands given this cost-reflective charge, we would provide funding for an efficient and economic level of expenditure to SHETL. SHETL would be expected to earn their existing regulated rate of return on this figure.

The connections would be constructed consistent with the requirements of the Security and Quality of Supply Standards (SQSS) and charges would be calculated using the standard charging model[2]. Clearly we would expect the transmission licensees to consider whether any changes were required to either of these documents to reflect the specific characteristics of island connections (as we would with any major developments).

[2]We note that the Government has taken a power under the Energy Act to adjust transmission charges and may exercise this power if it considers it appropriate.

This approach may have advantages in terms of simplicity. SHETL earns a regulated rate of return on its entire portfolio of assets. It could therefore be argued that this rate of return is lower than that which would be required by an alternative private investor and that the introduction of competition in financing, design, and construction would be unable to significantly reduce this figure. It could also be argued that benefits might result from having a developer with a Scottish presence and proven track record of constructing connections.

However, we are concerned that, were a monopoly approach not to deliver the least cost connection solution, the resulting TNUoS charges would be inefficiently high and could undermine the viability of generation projects. This could result in a situation where we were unable to approve funding due to the risk that assets became stranded – the costs of which would be met by GB consumers.

b) Merchant approaches – privately financing a connection to the main system

A second option would allow a licensed party to build, own and operate a section of line to the main transmission network. This approach has similarities to the method by which interconnectors (such as the link between England and France) are currently licensed.

Under this approach a party would apply for a licence and, were this granted, would be able to construct transmission assets. No regulated revenues would be provided to finance the connection. Therefore a TO would have to enter into negotiations with developers on the islands (or vice versa) to determine the route of a connection, technical standards to which the connection needed to be built, timescales for delivery and ongoing costs for use of the connection. One party would need to manage the interface with the SO at the point the line reached the existing transmission network, including paying TNUoS charges.

The details of the licence would need to be determined. However, our initial view would be that the licence could be relatively light-touch but include requirements to offer connections to third parties. This approach would differ from the others discussed in that the TO would set its own charges for the use of its assets. The approach to deriving charges would be likely to require some form of regulatory approval or oversight.

This approach might provide the maximum flexibility for developers and would mean that consumers were faced with no risk of incurring unnecessary costs. It may also be expected to contain the most scope for innovation – both in terms of technology and project financing. However, it could be argued that this approach may involve substantial risk which might discourage parties from investing and may lead to the poorly co-ordinated developments of connections. We would be interested in views on the viability of parties building, owning and operating transmission infrastructure outside of a price control regime.

c) Tendering the right to build a connection and obtain a regulated revenue

A further option under consideration would use competition to determine a TO which would be eligible for regulated revenues on a particular connection. As with all the options set out in this document, the exact details would need to be determined through further consultation, however a possible model is set out at a high level below. The approach would be designed to generate information on the lowest cost connection solution, which would in turn translate into a TNUoS charge. This might be expected to allow the efficient level of generation to connect and reduce the risk that Ofgem was unable to sanction funding for an investment.

Under this approach, a request for a connection from a generator on one of the islands to the SO would trigger two processes. Firstly, the SO would do as it does today and contact all relevant TOs to derive details of the reinforcements required to provide a connection

from the point at which the island link would be expected to meet the existing transmission network. This request would also begin the process of arranging a tender for the new transmission connection.

The tender would firstly advertise the fact that it was for a connection offer in a given location. This would give other parties (for example on the same island) the opportunity to signal that they were also seeking connection. All requests could be co-ordinated and developed into an invitation to tender. The extent to which this was prescriptive could vary, although, at a minimum, it would need to contain the desired capacity and delivery date for the connection.

Any party which wished to tender to construct a link would first have had to apply for a TO licence. This would, in effect, provide a pre-qualification process. It may be necessary to put a number of safeguards in place or specify a number of conditions which would need to be met were a licence to be granted. Holding a TO licence would provide a right, but not an obligation, to participate in tender processes. A question to consider would be which parties were able to become TOs (i.e. could a generator also be a transmission licensee?).

Once the invitation to tender was published, a limited period of time would be provided for bids to be prepared. Parties would be asked to provide details of the cost, delivery date, technical specification etc for constructing the link. Were it necessary, a series of bidding rounds could be provided with opportunities to resubmit being allowed. Parties would list the specification they would deliver for a given revenue stream over the life of the asset.

Ultimately, an assessment of each bid would need to be carried out and a winner determined. It is likely that determining a winner would hinge on factors wider than price alone. The winning bidder would receive a stream of regulated income over the life of the asset. The Authority would therefore have the final say on whether customers' money would be spent on a connection.

We accept that any tendered approach would be fairly complex and that there would be a need to develop, in particular, clear rules for the operation of a tender process. However, we think it has merits and may strike a desirable balance between providing flexibility to generators and minimising costs to customers.

Our initial view

To construct connections to the islands a balance needs to be struck. What is built needs to reflect the requirements of developers on the islands – both in terms of what is provided and the time at which it is provided – but it also needs to ensure that consumers aren't faced with a disproportionately high bill for building assets or, worse, paying the costs of assets which are not used.

The possibility of cost savings could have a significant impact on the viability of a number of generators. Any reduction in costs will translate into lower transmission charges for generators which in turn could increase the number of generators able to connect on the islands and reduce the risk of stranded assets. We note that some large connections which have characteristics in common with possible island links have been built internationally by a variety of companies following competitive tendering processes. There may be a greater risk of customers facing higher costs by using the existing monopoly transmission provider.

We therefore think that there might be merit in allowing any company which wishes to construct an island connection (rather than obliging SHETL) to signal its willingness to do so, through, for example, a tender process. This approach could bring competitive

elements into the process of determining who constructs connections. Crucially, this may reduce the risk that consumers pay over the odds but may also benefit developers if more flexibility can be introduced into determining what is built and when.

We also think that considering these options is consistent with our requirement to protect consumers through competition where possible. It is also consistent with our preferred approach to the regulation of offshore transmission connections, as detailed in the scoping document issued in March 2007, which has much in common with the island connections.

Responding to this document and way forward

We would welcome views on any issue raised in this consultation document. Responses should be received by Friday 20 July 2007 and be addressed to:

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Following consideration of respondents' views, we intend to further develop regulatory options and publish more detailed models for discussion during the latter half of 2007. We are also proposing to hold an industry workshop in August to discuss the issues set out in this letter. Should you wish to attend this event, please contact Shirley Ellis on 0207 9017498 or by email: Shirley.ellis@ofgem.gov.uk by 29 June to register your interest. Unfortunately, we are unable to guarantee places to all those that have registered their interest for the workshop. We will however endeavour to ensure that each organisation has at least one representative.

Should you wish to discuss any issues set out in this letter please contact Colin Green on 0207 9017143 or via email on colin.green@ofgem.gov.uk.

Yours Sincerely,

Robert Hull
Director, Transmission