National Grid –
European Business Development
31 Homer Road
Solihull
B91 3TL

Matthew Grant
European Electricity Transmission
Ofgem
9 Millbank
London
SW1P 3GE

Paul J. Johnson
Head of Development
European Business Development

Paul.j.johnson@nationalgrid.com
Tel +44 (0) 7836 280592

www.nationalgrid.com

17 January 2014
Our Reference NG/PJJ

Dear Matthew,

**Response to "Regulation of transmission connecting non-GB generation to the GB electricity transmission system" (Consultation published 18/11/2013)**

Please find attached a response from National Grid's European Business Development to the above consultation.

If clarification on any matter is considered necessary, please contact the undersigned

Yours sincerely,

Paul J Johnson

nationalgrid

European Business Development

**Regulation of transmission connecting non-GB generation to the GB electricity transmission system**

**A response from National Grid European Business Development**

National Grid's European Business Development Directorate welcomes this opportunity to contribute our views to the above topic. National Grid's interconnector and other business development activities are ring-fenced and separate from National Grid's transmission and distribution undertakings. We jointly own and operate the IFA and BritNed interconnectors (2 of the 4 existing links to GB) with our partners RTE and TenneT, respectively.

We are actively progressing new developments including the Nemo link to Belgium (with our partner Elia), an interconnector to Norway (with our partners Statnett), more capacity to France via a new link (with our partner RTE), and proposals for additional capacity to countries which may wish to export renewables to GB including Ireland, Iceland and Denmark.

This response contains no commercially confidential information.

There are potentially very significant benefits to GB consumers from the procurement of renewable energy from other countries. Financial and economic benefits arise from the potential to obtain renewable energy from lower cost sources than those that can be developed in GB due to either limitations on resource availability or land/planning constraints.

Our feasibility work shows that, despite the need for longer transmission links, there is significant potential for achieving attractive delivered energy costs to GB consumers compared with the most feasible domestic alternatives. This work also indicates that such options could (just) be developed in timescales consistent with the UK's renewable energy targets and commitments.

To achieve worthwhile purchases of energy from non-GB generation, especially in timescales required to meet the UK's targets, the design and delivery of suitable network links are crucial. Our feasibility work shows that, by harnessing economies of scale and simultaneously providing other system flexibility and reinforcement services by using the latest HVDC subsea link technology, it is possible to deliver energy from neighbouring countries at attractive unit costs. However, such unit costs are very sensitive to actually achieving the necessary scale of use and system integration arrangements.

For this reason, the regulatory arrangements for this transmission are key to realising the potential benefits for GB consumers.

We are aware of the existing standalone generation & link development proposals to deliver wind power located in Ireland to consumers in GB. These projects, by virtue of minimizing interactions with other developments, have the considerable attraction of offering renewable energy to GB consumers at reasonably certain costs and delivery timescales. They also offer attractive optionality concerning their development sequencing and further integration to enhance the transmission infrastructure supporting the wider European integrated electricity market. To be progressed, the developers will require a power purchase agreement which remunerates the specific costs of their generation and link assets. They will also require certainty that the generation, following the required unbundling of the network assets in accordance with EU requirements, can retain the required access to the GB market at an efficient and certain ongoing access price.

Facilitating such standalone proposals must be an important aspect of the transmission regulatory arrangements. However, in order to deliver wider benefits, the regime must also address:

a) the requirements of the host state of the non-GB generation to maintain and enhance the efficiency of their electricity system and transmission network (for example, the requirements of the Ireland's DCENR to ensure developments will be planned to effectively integrate into the Republic's transmission system);

b) the need to ensure the GB NETSO has the means to achieve the efficient development of the GB transmission system and thereby avoid unnecessary capital and operating costs that may fall to GB consumers or affect UK international competitiveness;

c) the need for developments to be consistent with EU policies for developing the internal electricity market and facilitating the free movement of goods and services including renewable electricity across Europe; and

d) the achievement of sufficient transparency and certainty of costs so that purchasing agencies (such as the UK government as assisted by the EMR delivery agent) can purchase renewable energy on an efficient and non-discriminatory basis in accordance with EU market and state aid rules.

Given these wider requirements, effective coordination of network issues by the national TSOs will be essential. Also, because there is a significant interaction between the need for network capacity and the volumes of renewables purchased by the GB government (which will in turn affect the cost of that purchased energy), the regulatory regime should facilitate strategic network development decisions (driven by the purchasing agency)

in addition to responding to specific access requests from individual generation developers.

Our answers to the specific consultation questions seek to address the need for this wider coordination to meet the purchasing authority's requirements in particular.

1 What are the key milestones for the delivery of non-GB generation and connections pre-2020? How does the decision on the regulation and licensing of non-GB connection fit into this timeline?

Speed is of the essence if any non-GB generation is to access the GB system by 2020. For the international transmission links, clarity of regulatory treatment at both GB and EU level as quickly as possible is key. As well as clarifying how single use links can transition into full interconnection with the original 'anchor' generator protected, there should be a parallel development of arrangements in which the UK government could procure a coordinated network solution directly from transmission providers by arrangements separate to those used to procure the renewable energy from non-GB generators.

**2** From the perspective of a non-GB project developer, how does the decision on the regulatory arrangements interact with Government decisions on renewable support (such as the award of a Contract for Difference (CfD)?

Arrangements which give rise to a specific network access cost for non-GB generation will give rise to complex interactions between the decisions to award CfDs and the progress of required network developments. For this reason a separate procurement of the transmission/interconnection solution by the UK government would be attractive and would facilitate a non-discriminatory award of CfDs between GB and non-GB generators.

**3** Are there other factors that Ofgem should be aware of relating to the timing and development of non-GB connections?

The regime should encourage a coordinated and consistent mitigation of generation and network environmental consequences (so that public acceptability of electricity infrastructure is not compromised by the perception of different mitigation standards being applied in different member states).

**4** Do you agree these are appropriate principles to take account in relation to non-GB connections?

The principles are individually unobjectionable but they segment consideration of the overall objective of delivering sustainable and secure electricity supplies to GB consumers at an affordable price. (Such segmentation may hinder the degree to which specific strategic network developments might be considered in order to facilitate the delivery of renewable generation).

**5** Are there other principles that we should also consider?

See answer to Q4

**6** We invite views on our interpretation of the different asset definitions/boundaries and interpretation of the legislation provided in this chapter. What implications does this have for the regulatory options presented in the next chapter?

We agree the definition of interconnection is the closest if not perfect definition of these assets.

**7** We are interested in views from stakeholders on what impact alternative interpretations would have on potential projects? Please provide detail where possible.

While a ruling that "direct and exclusive connections" need not be considered to be interconnectors might help improve certainty about future access and costs for the generators using them, such certainty would necessarily establish assets that have special status in terms of participating in the development of future infrastructure for the European integrated electricity market. The implications of such special status may have significant consequences for network development and planning which would need detailed consideration in the context of existing electricity legislation.

**8** We seek input from stakeholders on how generation licensing for non-GB generation could ensure appropriate safeguards for the export of renewables to GB transmission system?

While the implications for generators of such licensing is for others to comment, we would expect all technical issues relevant to the security and quality of supply experienced by GB consumers to be managed by the relevant TSOs under their duty to coordinate and comply with European network codes.

**9** Are non-GB connections deliverable by 2020 via direct and exclusive connections?

In our opinion non-GB connections based solely around transmission equipment could be available for commercial operation by 2020. In forming this opinion factors such as Manufacturing/Supplier capacity and consent issues are assumed to be favorable through necessary consultation. Also we are aware that any forms of sea bed surveys necessary for cable installation have not yet been undertaken.

**10** What are the technology challenges of delivering direct and exclusive connections? What are the technology challenges of delivering multi-purpose assets?

The technology needed to deliver either direct and exclusive or multi-purpose connections is available. The performance requirements of multi-purpose connections is more complex to plan and decide but such complexity must be balanced against the significant financial and environmental costs that could arise if less flexible direct and exclusive connections give rise to reinforcement requirements in existing transmission networks that the multipurpose solutions might avoid.

**11** What are the potential benefits and challenges of enabling flexibility for a non-GB connection to also be used for a) market-to-market trading; and b) GB network reinforcement? What are the implications for investment certainty?

The benefit of integrating a non-GB connection so that it permits market-to-market trading (i.e. a traditional interconnection role) is that it improves the scope for GB consumers to gain access to a wider pool of generation and balancing resources, hence improving security of supply, the efficiency of electricity production, and the effectiveness of competition in determining efficient prices. The benefit of using non-GB connections to help address GB network reinforcement needs is the potential to avoid more expensive or environmentally intrusive GB network reinforcements (such as new lines through sensitive North Wales areas). The potential costs of achieving these benefits, in an efficiently designed and coordinated network, will be lower than the alternative developments but the associated design/approval process could make the task of bringing the first projects on-line more complex and thereby slow market entry of non-GB generation compared to that which might arise if the developers of such projects are free to pick arrangements which minimise their costs and risks. For GB consumers, the benefits of efficient network designs and facilitating new non-GB generation entry are not mutually exclusive but depend on the regulatory regime.

**12** Is the interconnector licence with exemptions(s), as currently available, a feasible option for non-GB connections? If not, what are the key challenges of applying this route to non-GB connections? How could these challenges be addressed?

Our assessments suggest the interconnector licence with suitable exemptions could represent a feasible regulatory option but, even with suitable exemptions and safeguards to protect investors against future developments, the challenge associated with determining appropriate support by means of the award of a tailored CfD would be considerable. As the generation costs will be the most material consideration in awarding a CfD, and the award will need to address non-discrimination 'state aid' conditions, we think there is merit in separating the procurement of the international link from the procurement of the renewable generation for GB consumers so that consistency in generation support levels can be assured.

**13** Under this route would an exemption (under Article 17 of the Electricity Regulation) be required? If so, which provisions would you seek exemption from? How would your project be affected if exemptions could not be applied for?

Given that the connection network would need to be unbundled from the non-GB generation under EU regulations, an exemption under Article 17 is likely to be required in order to ensure any ongoing access/use of system charges paid by the generator to the connection owner could be kept and used to finance the connection owner's investment costs. Without such an exemption, the network owner faces the risk that interconnector use of revenue requirements might be interpreted in such a way that access charges could not be retained.

**14** Given that an application of the regulated Cap and Floor or fixed revenue model would take time to implement for non-GB connections, should these still be explored further?

There is a likelihood that the desirable involvement of the national TSOs in determining the best connection arrangements for non-GB generation may well mean that the resulting project may not qualify for exemption. On this basis, an option which does not require exemption (such as cap and floor or fixed revenue regulation) should be available.

**15** If so, what are the main challenges and benefits of applying a regulated Cap and Floor or fixed revenue model to non-GB connections? How could these be addressed?

The regulatory requirements for establishing a cap and floor or fixed revenue regulation for an unbundled non-GB connection are not significantly different from the regulatory task of establishing an exemption under Article 17. The challenges of awarding a suitable CfD prior to establishing the specific network costs (and associated regulatory parameters) would be as discussed above.

**16** What is the appropriate mechanism for ensuring access to capacity for non-GB generation?

Our understanding is that generator operators would require an access right consistent with the expected life of the generation assets and have confidence about the level of any associated access charge. This would appear to be achievable in the context of either a bilaterally agreed contract with the network owner or under the terms of a regulated revenue stream. If or when the link becomes a multi-user link, we do not see why the long-term access arrangement should not continue provided it is subject to "use it or sell it" conditions (because the generator would be meeting the costs which that generator imposes and any other costs would need to be met by the new users that give rise to them).

**17** What are the implications of following the current connections process for non-GB connections? Should non-GB generators be treated differently to GB based generation? Should non-GB generators be treated differently to other interconnector users? If so, please provide your reasoning.

If non-GB connections are considered to be interconnectors (with one or more users) then it would be appropriate for them to be developed as part of an inter TSO coordination activity.

**18** How would the role of the interconnector operator need to adapt if a direct-connect asset was used for additional purposes – such as a) market-to-market interconnection; or b) GB network reinforcement? Should the GB or non-GB NETSO have a role in operating these assets? If yes, what role?

We understand that a non-GB connection which is licenced as an interconnector would be certified as a TSO under current UK regulatory practice. In accordance with this certification, we would expect the operator to be responsible for discharging all the relevant activities of a TSO under the European regulation, adapting specific operational activities as circumstances demand.

**19** Can the existing charging/cost allocation approaches used onshore or for interconnection be applied to non-GB connections? If not why not and what alternatives are available?

Provided that non-GB generator access payments to unbundled international links are considered equivalent to explicit auction revenues on interconnectors, then all other EU charging and cost allocation principles should be applicable.

**20** How can capacity allocation for direct and exclusive connections ensure consistency with European legislation and European Network Codes? How could this be achieved with the introduction of market-to-market connections?

See previous answer.

**21** Are there other challenges we should be considering when looking at non-GB connections?

As identified above, the key issue for progressing non-GB renewable generation is establishing efficient and non-discriminatory power purchase agreements on behalf of GB consumers. The network regulatory arrangements must fit with the requirements of establishing such agreements.