



## Highlands & Islands ENTERPRISE

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Dear Mr Green

### **Transmission Price Control Consultation**

Thank you for the opportunity to respond to the above consultation.

The Highlands and Islands of Scotland are home to much of the UK's renewable energy resource. Development of that sector is a key priority for HIE, the Government's economic and social development agency for the area, given the wealth of economic development opportunities it could offer. For that reason, HIE, and its local partners (Shetland Islands Council, Orkney Islands Council, Comhairle Nan Eilean Siar, Highland Council, Argyll & Bute Council and Moray Council) have taken a close interest in regulatory developments and have responded to a number of consultations issued by Government, Ofgem and NGC. This consultation is of particular relevance as the Highlands & Islands have:

- Some of Europe's best renewable energy resource (notably wind, wave, and tidal).
- A very high uptake of distributed renewable energy generators, particularly wind.
- The weakest transmission and distribution infrastructure in the United Kingdom (UK).
- The highest Transmission Use of System charges for generators in Great Britain.
- A very significant contribution to make to Government 2010 and 2020 targets for renewable energy supply provided the frameworks for connection and charging are correct.

HIE and its partners therefore welcome the opportunity to respond to this consultation, and would very much welcome further opportunities to develop and present more detailed proposals for consideration. The following response majors on price control for the electricity transmission businesses, and specifically on measures which facilitate access to the renewable energy resources of the Highlands and Islands.



## 1. INTRODUCTION

Overall, HIE and its partners are very supportive of the approach taken for the forthcoming price control period. We strongly agree that new approaches are required in the context of significant, and ongoing, changes to the way in which we produce and use energy. Renewables are a major part of these changes, but it is clear that strong action on renewables is in part a required response to other events in the energy industry: ageing assets, rapidly increasing fuel prices, worsening energy security and of course, environmental concerns.

The consultation document refers to Ofgem's environmental duties in justifying action on renewables. We believe that Ofgem's primary duties are just as relevant when renewables are to be a mainstay of our future energy needs. The longer term interests of consumers will be met by connecting low carbon or carbon free power from secure, indigenous, large volume sources of renewable power. By their nature, these sources will have low supply risk and low political risk which in turn leads to enhanced price stability which in turn benefits consumers. Diversifying supply by source and by location directly increases competition by introducing additional capacity and volume into the market place.

It remains our view that these initiatives are at odds with the zonal TNUoS charging methodology and proposals for zonal losses.

## 2. FORM AND STRUCTURE OF THE PRICE CONTROL

*Question 2.1: Do you think the standard RPI-X framework needs to be refined or augmented in its application to the transmission licensees?*

Yes. We consider that alternatives to re-opening price controls are desirable for securing projected investments. While investment for Beaufoy-Denny was ultimately allowed under a re-opening of the price control, it was a lengthy process. Furthermore, it trialled cost / benefit assessments for a series of investments which resulted in the approval of just one investment package. At present there is no clear mechanism by which further investments can be released – either through alternative cost / benefit assessments or through a re-evaluation of user commitments.

*Question 2.2: Do you think that rolling incentive mechanisms are the most appropriate way to deliver a consistent strength of incentives over time, and do you think they are applicable to the transmission licensees.*

We believe that a multi-layered approach is most likely to deliver a wide range of required investments in the most efficient, and flexible, manner. We agree that rolling incentives could be a useful tool, but that care should be taken to ensure that they do not create an incentive to delay investments. Perhaps there might also be a mechanism to recover, within the price control period, any significant underspend compared to that forecast.

*Question 2.3: Given the large bids made by some licensees for asset replacement expenditure, how do you think the regulatory regime should look? Do you think that an "information quality incentive mechanism" is the best way to improve our information on efficient costs, by rewarding licensees more if they accept more challenging cost targets?*

We agree with the general approach of creating incentives for cost-effective investments. Furthermore, an approach which allows for a variety of outcomes without any re-visiting of the

price control is probably essential for delivering timely infrastructure. As such the information quality incentive mechanism certainly has merits. We would be concerned if it penalised or disadvantaged licensees for levels of absolute spend – the objective should be to incentivise efficient, but timely and necessary, investments. Any rewards should be referenced to the levels of justifiable spend put forward by each licensee.

*Question 2.4: Are additional measures needed to promote innovation? What is the scope for innovation by transmission licensees to benefit consumers?*

We are strongly of the opinion that measures are justified to promote innovation by the transmission licensees. This should include revenue allowances which reflect higher-risk investments, as well as allowances for departures from normal technical and quality standards for trialling new equipment and practices. We believe such measures are essential for promoting change.

The importance of innovation in this area is demonstrated by the European Commission's "Technology Platform" dedicated to future electricity grids, or "Smart Grids" [1, 2]. This encompasses not only the infrastructure itself, but operational tools, metering, demand-side management and many other areas. In seeking to integrate increasing penetrations of wind energy, the GB transmission licensees will need to consider the use of, for instance, DC technology largely dedicated to the delivery of wind energy, integration of storage solutions and short-term forecasting of wind energy for system operation purposes.

### **3. ELECTRICITY INCENTIVES**

*Question 3.1: Do you agree with our conclusion that the use of locational revenue drivers is the most appropriate way to set allowances for the electricity transmission licensees in the context of significant uncertainty over the future demand (and location of that demand) for network capacity?*

We agree that the use of locational revenue drivers seems a sensible approach.

In the context of wind energy in Scotland, we believe that there is scope for reaching a middle ground on determining with greater certainty the location and timing of demand for network capacity (see response to Question 3.5).

*Question 3.4: When should we supplement the revenue drivers with other mechanisms to top-up revenue allowances in exceptional circumstances where major investment is needed? How might these other mechanisms work?*

One of our primary areas of interest in this context is the provision of infrastructure required to access the renewable energy resources of the Scottish islands. The need for infrastructure to the islands will be established (for accessing required future generating sources) via planning consented generation projects. The present demand for infrastructure investments to the islands and to offshore locations is a relatively new demand on the privatised electricity industry. As such we agree that some imaginative solutions will be required.

Some form of regulated approach to provision of extensions of the transmission system to the islands would be desirable. This was the preferred (and now adopted) approach for extensions to offshore wind farms with which there are important parallels. However options which could

possibly deliver investments, in shorter timescales, are worthy of consideration. In any event, a regulated approach does not necessarily exclude private investment or an approach, which shares risks between the private and public sector. The exceptional circumstances of island connections notwithstanding, any support (financial or regulatory) that may be provided to the offshore electricity transmission licensees should also be considered for application in island circumstances.

We would recommend a number of actions by way of informing the debate, as follows:

1. Consideration of alternative models for funding subsea cables to the islands and associated onshore reinforcements. This should include:
  - Incorporation into the baseline expenditure of the transmission companies (similar to Beauly Denny)
  - Alternative funding mechanisms, considering examples such as the NorNed cable (which has benefited from European funding<sup>1</sup>) or the Basslink cable to Tasmania (the contract for which the UK's National Grid successfully bid).
  - Combinations of the above.

It is worth noting that on the Basslink project, National Grid states that:

*"Basslink will offer an alternative to existing electricity supply in Tasmania and Victoria. As such, it will increase competition and put downward pressure on prices in both States. By opening up the Victorian market to Tasmanian producers, Basslink will encourage innovation and investment in capacity in Tasmania, particularly for green, clean wind power"*

And that:

*"The increased capacity and security of supply in Tasmania will enable the State to seek further investment in high-energy users such as manufacturing."*

And that:

*"Basslink will enable Victorians and other States to access electricity generated by the substantial renewable energy sources – hydro and wind – from Tasmania. By choosing green, electricity, consumers in Victoria will impact the amount of the greenhouse gases, such as CO<sub>2</sub>, that is produced. The bigger marketplace will also encourage additional investment in green energy, in particular wind." [iii]*

2. A revisiting of the cost / benefit analysis undertaken for TIRG for connections to the islands. Alternatives to the wind energy curtailment cost approach should be investigated – HIE does not consider this to be a realistic assessment of the "cost" of failing to access island resources. Rather the cost relates to the potential failure to meet long-term energy needs from sustainable forms of energy (i.e. what are the long-term costs – including external costs, security of supply and risk issues – of alternatives such as new coal, nuclear or gas plant). In the short to medium-term, there will be costs and value for money implications of failing to meet renewables targets, and for the continued use of diesel generation on the islands. Studies

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<sup>1</sup> The funding was for priority connections between EU states which would not apply for connections within a state. Nonetheless, alternative European funds may be available for the islands, especially for innovative approaches.

by Oxford University, the Carbon Trust and the UK Energy Research Council demonstrate that geographic dispersion of wind power will play a substantial part in smoothing the variability of wind power on the overall electricity network.

3. Adoption of new transmission access arrangements where both the transmission company and project developers move towards a middle ground (see answer to Question 3.5 below).

We would recommend twin-tracking progression of these different options.

*Question 3.5: Do you agree that, in the current market context, it is important to explore options to change transmission access arrangements? Do you agree with the process we have set out to progress this work?*

We absolutely agree that the current access arrangements are unsuitable, and are very supportive of change. We recognise that Ofgem can only approve or reject (as opposed to drive) new proposals in transmission access. Nonetheless, we welcome Ofgem's pro-active stance in promoting reform, which is very helpful.

There is some frustration at the manner in which BETTA was implemented, in the knowledge that some of these crucial reforms would fall under the rather unwieldy and lengthy BSC modifications process, or be at the behest of NGT. Furthermore the BETTA cut-off date for connection applications has in large part encouraged developers to submit early connection applications. We would also note that while compared to the cost of a connection the outlay for an application is small, it is not, as the consultation suggests, a "costless" exercise. The sums involved are not insignificant for small and / or early-stage projects.

We believe that there are options for improving the certainty of prospective connections. These include:

- An informed project-by-project assessment of the probability of success, and of development timescales.
- Relaxing FSL demands in return for greater commitments from generators – in the form of for instance stepped payments or FSL provisions corresponding to defined benchmarks in project development. The formalisation of a "sanity" break point following advanced services on island connections would be an important step. This is where FSL beyond advanced services would be dependent upon agreement from all relevant parties that s.36 and s.37 planning consents are in place together with an economically viable TNUoS charge.
- Consideration of the "group processing" and "gate" queue processing adopted in Ireland. This releases blocks of capacity (in "Gates"), where projects entering each gate are prioritised in groups based on optimal project characteristics [19]. While this has been a rather lengthy process, there are some valuable experiences in a situation which is remarkably similar to that in Scotland.

#### **4. EXPENDITURE ANALYSIS: CAPITAL EXPENDITURE**

*Question 6.4: In carrying out cost / benefit analysis to assess the efficient level of transmission capacity to accommodate wind generation, what new factors need to be taken into account?*

This is considered in our answer to question 3.4 above. To reiterate we believe that alternative cost / benefit assessment methodologies should be considered alongside the curtailment cost method.

The values assigned to ROC-eligible generators to 2027 seem a little high as it appears to assume an ongoing constrained ROC market. This is however realistic where transmission constraints limit renewable energy capacity. Predicting electricity prices into the future is subject to substantial uncertainty, and thus use of a range of values might be appropriate.

The review of treatment of wind generation in the SQSS is very welcome. This should lead to a more efficient utilisation of transmission capacity, based on probabilistic assessments of the use of transmission capacity by wind. Further to the answers in 3.4, whilst we look forward to the SQSS deliberations, we already know the islands have proven and exceptional capacity factors [']. The islands will produce more MWh per year and therefore will better utilise any infrastructure investment.

*Question 6.5: What would be the most appropriate approach to restoring the incentives for relevant parties to reach the most cost-effective connection design? How should the TPCR allowance take into account the various solutions?*

Quite simply, the incentive for negotiating a connection cost was the potential for saving substantial sums of money, traded off against a very low likelihood of constraint. Thus an obvious solution is the potential for reduced TNUoS charges for a non-firm connection. As more plant connects onto an increasingly utilised network, estimates of constraint levels would need to be reasonably accurate.

Any revision of the SQSS should also have a bearing on connection assets.

We look forward to seeing the results of the consultation in due course.

Yours sincerely



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Head of Renewables

On behalf of a Highlands & Islands partnership comprising:-  
Highlands & Islands Enterprise  
Shetland Islands Council  
Orkney Islands Council  
Comhairle Nan Eilean Siar  
Highland Council  
Moray Council  
Argyll & Bute Council

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- [<sup>i</sup>] “Technology Platform for Electricity Networks of the Future.”  
[http://europa.eu.int/comm/research/energy/nn/nn\\_rt/nn\\_rt\\_dg/article.2262\\_en.htm](http://europa.eu.int/comm/research/energy/nn/nn_rt/nn_rt_dg/article.2262_en.htm)
- [<sup>ii</sup>] European Commission, Directorate-General for Research, Sustainable Energy Systems, 2006. “European SmartGrids Technology Platform. Vision and Strategy for Europe’s Electricity Networks of the Future.”  
[http://europa.eu.int/comm/research/energy/pdf/smartergrids\\_en.pdf](http://europa.eu.int/comm/research/energy/pdf/smartergrids_en.pdf)
- [<sup>iii</sup>] National Grid Australia, Basslink Project Website. “The Need Case.”  
<http://www.nationalgrid.com.au/document.php?objectID=119>
- [<sup>iv</sup>] For example, criteria for Gate 2 are now proposed by the Commission for Energy Regulation, at: <http://www.cer.ie/CERDocs/cer06071.pdf>
- [<sup>v</sup>] Orkney and Shetland Renewable Energy Resource Assessment 2005. Available Shetland Renewable Energy Forum – [info@sref.co.uk](mailto:info@sref.co.uk)