

Atlantic Superconnection Corporation: response to Ofgem consultation on the future of electricity interconnection: Proposal to roll out a cap and floor regime to near term projects:

Background on the ASC and the proposed interconnector to Iceland:

The project:

Iceland has significant geothermal and hydro resources that allow the generation of cheap, reliable baseload and peaking power. This resource significantly exceeds the likely domestic demand within the country.

Given the reduction in interconnector costs and transmission losses, we propose to build a 1.2GW interconnector between Iceland and the UK that will allow the UK to access secure, cost effective renewable energy at a price below that of domestic renewable technologies and that is cost competitive with nuclear power.

The proposed interconnector would be the longest in the world (at 1200-1600km), although there are now reasonable benchmarks that have already been built or are under construction (such as the Nor-Ned cable between the Netherlands and Norway).

The proposal has been discussed for 30 years, but is now feasible because:

- Advances in HVDC technology have reduced transmission losses to less than 5% for the link, and development costs have fallen.
- Experience of geothermal power generation is improving – therefore costs are falling.

The benefits:

Our analysis indicates that this will bring significant benefits to the UK and to Iceland:

- Access for the UK to around 1.2GW of cheap, reliable and renewable power. In addition to geothermal baseload, the UK will gain access to fast responding hydro power that will help offset the intermittency of the growing share of capacity provided by wind generation.
- Revenue for Iceland – a significant contribution to Icelandic GDP from electricity exports as well as tax revenues and secondary industrial benefits.
- Industrial benefits for both countries – for example constructing the cable will require several times the annual aluminium output of Iceland and need new manufacturing facilities.

Financing requirements in the UK and in Iceland:

The financing of the interconnector is complex, with investments required in new generation capacity, grid upgrades and converter stations in Iceland, the build cost of the interconnector and conversion/ connection costs in the UK.

Initial estimates suggest that the total capex required will be £4-5bn.

Any investor in the interconnector would need full confidence that the necessary investment will be made across the piece. The revenues for the interconnector would come from generators, who would rely on a combination of market revenues and payments from CfDs and the capacity market, once these become available for non UK generators. For the interconnector to be financeable, the

developers will need clear, long term contractual commitments with generators in Iceland to be sufficiently confident to put the necessary financing in place.

Outline timing:

We intend to commence the necessary seabed surveys in the Spring of 2015, with detailed design work continuing until 2016, construction starting in 2017/18 and commissioning expected in 2021/2022. **Although we will commission the cable after 2020, the timetable for our decision making is the same for other, more straightforward, projects which will commission before 2020. Our final investment decision is planned for 2016.**

Atlantic Superconnection Corporation:

The Atlantic Superconnection Corporation has put together a team of experts to develop the interconnector – their skills and experience include:

- Financing, setup and construction of major projects
- Political understanding and experience around energy policy
- Energy markets and policy within the UK and across Europe
- Oceanography

The development team consists of:

- Edmund Truell – Chair of London Pension Authority and CEO Tungsten Group, with 28 years of experience in private equity and debt markets
- Charles Hendry – Former Minister of Energy for the UK Government, who signed the original MOU with Iceland
- Graeme Bevans – Has completed the acquisition, development and management of \$40bn of infrastructure projects
- Jonathan Brearley – Energy and climate change adviser – previously Director of Electricity Market Reform in DECC
- Olivia Bloomfield – Leads on talent recruitment and organisational management

Our views on the proposed cap and collar model:

Given that the interconnector to Iceland is due to commission after 2020, we have restricted our comments to the compatibility of the regime with a project like ours. As stated above, the complexity and lead times for this project mean that regulatory decisions need to be made sufficiently quickly for us to be able to make a final investment decision in 2016.

This means that we will need early engagement from Ofgem, and that the regulatory arrangements for projects commissioning after 2020 will need to be in place sufficiently early to allow us to make an investment decision in time. Our preferred regulatory approach is for us to apply for an ‘Article 17¹’ exemption to interconnector charging and unbundling rules.

Our main points are expanded below.

¹ Article 17 of regulation (EC) 714/2009

- 1. The timetable for this project is very similar to many that plan to commission before 2020. Therefore, we need early engagement from Ofgem to ensure we can meet planned investment times.**

This project brings huge benefits to the UK, in terms of enhanced security of supply and access to cheap low carbon power. However, the project is highly complex and will require the co-ordination of investment in the Icelandic grid, expansion of generation and the development of the link itself. In order to start development, significant development capital will be required by the end of this year.

Therefore, we need early engagement from Ofgem, so that we can begin to set out the potential regulatory arrangements for this project. Any development of the post 2020 framework, if they are to apply to the interconnector to Iceland, needs to align with the timetable needed to complete this project.

- 2. Our preferred route would be to work with Ofgem and the Icelandic regulator to develop an approach based on existing arrangements with some exemptions made through 'Article 17' of Regulation (EC) 714/2009.**

Because of the complexity of the financing, it is not feasible to finance the link without a direct, long term contractual relationship between generators and the developers of the interconnector. It is likely that for a large proportion of the capacity on the interconnector the generator would need a CfD, and, to allow the necessary investment to go ahead, both parties would need a long term contract for the necessary transmission capacity to bring the low carbon power to the UK.

Therefore, it is likely that any developer will need to receive exemptions from the EU rules on unbundling, as well as some of the rules around charging for the link.

Our preferred model is for the majority of the interconnector capacity to be funded based on long term contracts with generators, who receive a CfD for their low carbon power. The concept would be that, at the time of agreeing the necessary support, the price paid for use of the interconnector could also be agreed. This would allow those financing the link to be confident of their returns. In essence, the CfD negotiations would treat the generation and connection as one 'overall' major project.

Under the current cap and collar proposal, it is proposed that developers would need to comply with all other European rules around charging and operation of the interconnector, therefore unless this restriction was lifted, then the cap and collar approach would not be sufficient for the interconnector to proceed. We would need to examine the case further to assess whether the cap and collar approach to financing the link, alongside the exemptions described above, can be made to work.

- 3. Given the complexity of this project and the high development costs, we do not believe that a regulatory model based on centrally identified interconnectors will work for projects of this scale in the longer term:**

An attractive part of the proposed short term regime is that it remains 'developer lead', with Ofgem assessing the economic case, based on the evidence submitted by the developer. We believe that this should be maintained in the longer term.

Large scale and complex projects, such as the one proposed here, require significant development capital. For example, completing the necessary seabed surveys and design work to be in a position to be able to agree the detailed regulatory arrangements will take an upfront investment, fully at risk, of tens of millions of pounds. This is in the nature of venture capital and to have the return on such risky capital fixed in a regulatory regime is to render it unlikely that any one will risk the necessary seed capital beforehand.

Equally, it is unlikely that any central body will have access to sufficient information to make a meaningful assessment of the costs and benefits of this project, without this upfront design work being completed. Therefore we do not believe that this project could be robustly assessed by a central body before significant capital is invested, so individual developers will need to initiate this project for it to be carried forward.

Any developers who take the necessary work forward will need to do so in the confidence that they can develop the project further if they conclude it is feasible and cost effective. The 'developer led' approach therefore fits very well with a model where the developer invests sufficiently to assess the feasibility of the project and then demonstrates to Ofgem the positive cost/ benefit case for the project to go ahead.

4. Any approach taken by Ofgem will need to be compatible with the political and regulatory regime in Iceland:

Any regime will need to be compatible with requirements that will be set by the Icelandic government and regulator. We would encourage both sides to start discussions early on the type of regime that would work for the UK and for Iceland.

The model, proposed in the consultation, of setting a cap and floor for around half of the interconnector revenues and agreeing an alternative regime for the other half adds significant additional complexity. Therefore our preference would be for the regime to be set for the interconnector as a whole and agreed between regulators.

5. Given the need to proceed with a significant investment in the development of the link, we would welcome an early discussion with Ofgem on the appropriate way forward:

If the proposed interconnector to Iceland is to proceed in a timeframe that will benefit the UK, we will need to start serious development work this year. Equally, as stated above, given the lead times in construction, we will need to get clarity soon on the right regulatory approach. **Therefore, we would welcome an early and ongoing discussion with Ofgem officials on the best way to approach the regulatory regime for the construction and operation of the interconnector to Iceland.**