

14th February 2012

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Dear Anthony

Project TransmiT: electricity transmission charging – assessment of options for change

Please attached Aquamarine Power's response to the issues raised in your assessment of the options for change to the electricity transmission charging methodology.

A fully socialised model would give the UK much greater security in achieving its low carbon generation targets, and would insulate consumers from price rises caused by global wholesale fossil fuel prices. We welcome the progress made under the proposed Improved ICRP model and accept that a solution may involve an element of locational charging.

We remain concerned at the high level of charges proposed for Scottish islands and the severe impact this will have on the UK's nascent wave and tidal sectors. Two thirds of the UK's total projected wave and tidal energy development aspirations are dependent on island interconnectors and we believe that, by failing to address the issue of high charges to Scotland's islands, Project TransmiT is putting the development of the UK's world-leading wave and tidal sector at risk.

The current direction of Project TransmiT may be discriminatory against wave and tidal energy generation and appears contrary to Directive 2009/28/EC of the European Parliament and subsequently repealing Directives 2001/77/EC and 2003/30/EC, in particular Recital 63 which states:

"Electricity producers who want to exploit the potential of energy from renewable sources in the peripheral regions of the Community, in particular in island regions and regions of low population density, should, whenever feasible, benefit from reasonable connection costs in order to ensure that they are not unfairly disadvantaged in comparison with producers situated in more central, more industrialised and more densely populated areas."

The challenge for islands is as shown in figure 1 below – a massive differential between Scotland's islands and the north of Scotland.

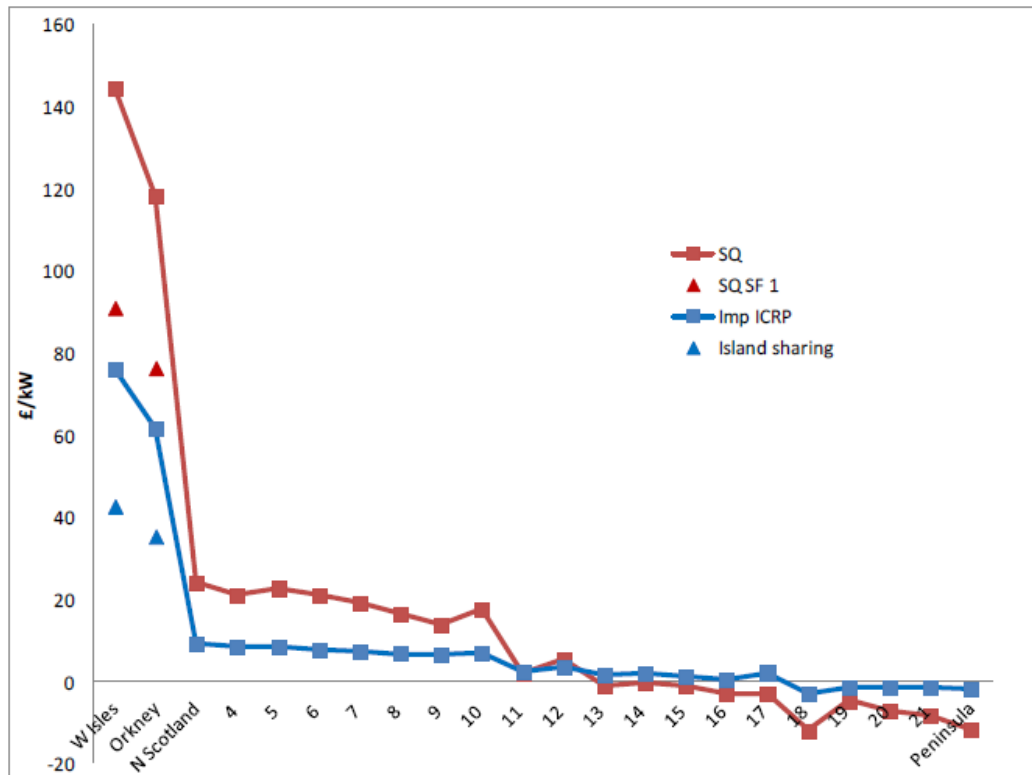


Figure 1: Graph showing charging differential under different scenarios

A number of solutions to this inconsistency have been proposed by Highlands and Islands Enterprise, Scottish Renewables, Renewable UK and others.

We do not propose to re-iterate these potential solutions. We will however, highlight where we believe the current approach is inconsistent and we would encourage Ofgem to resolve the islands issue once and for all by putting in place a charging regime which offers reasonable transmission charges to Scottish islands.

Our detailed response is attached.

We would encourage Ofgem to do its utmost to grasp the opportunity offered by an equitable solution to the long-running barrier of transmission charging to Scottish islands.

Yours sincerely

Martin P. McAdam

Martin McAdam
Chief Executive Officer

Project TransmiT: electricity transmission charging – assessment of options for change

Aquamarine Power response

1. Socio-economic impact of marine and island renewables

The recent European Commission paper “Developing a Maritime Strategy for the Atlantic Ocean Area¹” states:

“The potential of the Atlantic’s powerful waves and strong tides needs to be exploited as well. The predictable nature of energy from tides can complement the fluctuating energy from wind. Islands can receive a high proportion of their energy from the sea. However successful deployment of large scale offshore renewable energy will only happen if grid connections are ensured to link the main production centres to the consumption.”

It is clear that marine energy offers such potential. The recent Member State position paper on marine energy², co-signed by nine Member States, underlines the potential for marine energy alone to provide 26,000 direct EU jobs from ocean energy by 2020 and 314,000 direct EU jobs from ocean energy in 2050.

RenewableUK estimates the UK marine energy industry could employ 19,500 individuals by 2035, bringing £6.1bn investment and generating a GVA of £800m per annum³, with over 800 people employed in the sector already.

The majority of proposed wave and tidal development in the UK is dependent on island links. The Crown Estate has granted 1600 MW of seabed leases to wave and tidal developers in the Pentland Firth and Orkney Waters leasing round⁴. Of these, 1050 MW, or 66 per cent, are dependent on island interconnectors

The Crown Estate has also leased a further 125 MW leases outside of the PFOW leasing round⁵. Of these, 100MW, or 80 per cent are dependent on island interconnectors.

¹ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0782:FIN:EN:PDF>

² http://www.eu-oea.com/euoea/files/ccLibraryFiles/Filename/000000001047/Cover%20letter%20position%20paper_merged.pdf

³ http://www.bwea.com/pdf/publications/WandT_SoI_report.pdf

⁴ http://www.thecrownestate.co.uk/media/71435/pfow_development_sites_map.pdf

⁵ <http://www.thecrownestate.co.uk/energy/wave-and-tidal/our-portfolio/>

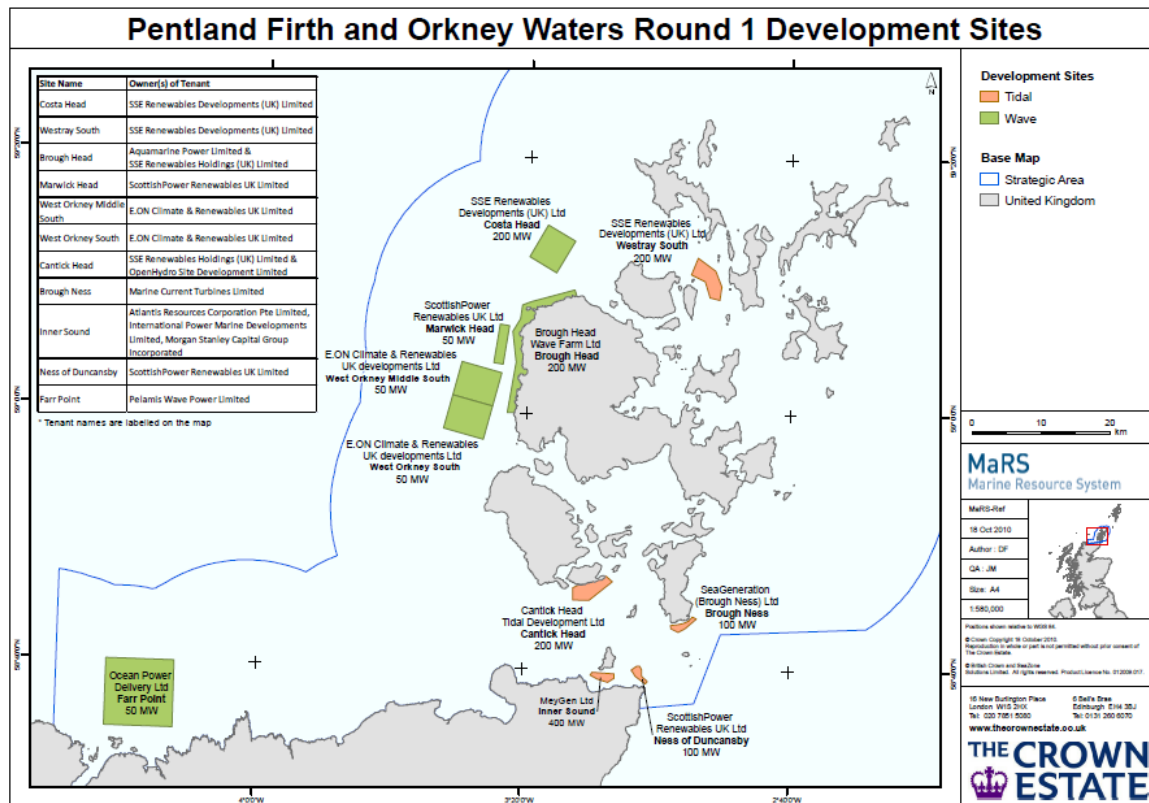


Figure 2: Pentland Firth and Orkney Waters Development Sites

In total, 66.6 per cent, or two thirds of the UK's total projected wave and tidal energy development aspirations, are dependent on island interconnectors.

It is therefore not overstating the case to say the future of the UK's world-leading wave and tidal sector is dependent on reaching an equitable solution to the issue of transmission charging.

Given the need for wave and tidal development to locate where the waves and tides are strongest – mainly in and around the Scottish islands – and the lack of suitable resource in other locations within the UK, we would urge Ofgem and DECC to revisit the EU Renewables Directive in order to clarify whether this situation is now discriminating against these particular forms of generation.

2. Inconsistency in charging regime across the UK

Social and economic factors notwithstanding, we believe that the proposed model will require generators to pay for use of the transmission network in a very different way to their mainland counterparts. We believe this approach to be inconsistent at various levels including, but not limited to:

- **other islands are charged as part of the mainland network** – other islands have been viewed differently under the same charging methodology, and so incorporated into the methodology covering the mainland network, including both the Isle of Anglesey⁶ and the Isle of Skye⁷. The treatment of any island is not yet enshrined in any of the network codes, and therefore, we are unsure as to why this inconsistency exists when other precedents have been set elsewhere.
- **islands are an integral part of the UK** – in receiving 1 ROC for wind projects instead of the 2 ROCs which offshore wind receives, the islands are being treated on a par with mainland UK. Yet the proposed transmission charges put the islands on a par with offshore wind farms. It is our view that the islands are an integral part of the UK and should be treated as such.
- **the direction of European, UK and Scottish energy policy** – the proposed approach is misaligned with both Scottish, UK and European energy policy. Such misalignment means that any meaningful renewables development on the islands is economically unviable and we believe this has disadvantaged the Scottish islands and will continue to do so unless the issue is dealt with.
- **other network regulation in the UK** – the proposed approach is inconsistent with other types of network regulation in the UK, where the aim of achieving the breakdown of geographical boundaries has led to consistent treatment of the islands and mainland GB.

The Scottish islands have a huge role to play in meeting Scottish and UK renewable energy targets. Project TransmiT has provided the ideal vehicle for Ofgem to address prohibitive use of system charges for the Scottish islands, and we are disappointed the opportunity to address the islands issue has so far been overlooked.

Currently, charging for use of the Scottish islands are treated in the same way as an offshore wind farm, in the sense that the charging methodology views the islands as part of the offshore grid network. However, the islands have distinctly different characteristics, including the existence of demand on the islands⁸, where imports of electricity from mainland Great Britain will occur at times of higher than expected demand, or reduced renewables output. Whilst the islands are considered under the methodology as an offshore wind farm, the transmission links

⁶ the Isle of Anglesey is connected to the mainland with a 400kV circuit as Wylfa Magnox Nuclear Power Station is located to the north of the island.

⁷ the Isle of Skye is connected to the mainland at 132kV, and part of the mainland zone 'West Highland and Skye'

⁸ Shetland, Orkney and the Western Isles have an approximate total populace of 70,000

are not open to competitive tender whereas offshore transmission links are, which keep costs to the consumer to a minimum.

3. Use of Section 185 powers

It has been stated previously that the Department of Energy and Climate Change (DECC) may be able to utilise powers under section 185 of the Energy Act 2004 to cap charges to the Scottish islands, should Ofgem fail to address the issue via Project TransmiT. We do not believe this is the best solution, for a number of reasons:

- Section 185 agreements will only last for ten years. Investment cases for renewable developments are made on a 20 year project life span. This will make the investment case more challenging. Any s185 agreement would cover all islands and would commence when the first transmission upgrade complete – so if Orkney has an interconnector in place in 2015, say, the agreement would run ‘til 2025 for all islands – irrespective of when their transmission line is in place. So for some locations the agreement will be less than 10 years.
- It is unlikely the s185 process will conclude quickly. We understand from SHETL that the order for the transmission cable for the Western Isles interconnector will need to be placed in October 2012 in order to complete the upgrade on schedule in late 2015. Unless the Section 185 process concludes before October, and gives a reasonable result, the vital transmission upgrade to the Western Isles will not go ahead.
- The cost of Section 185 will still have to be socialised in some way – most likely by being spread across all consumers. In other words the cost will have to be socialised by DECC rather than by Ofgem.
- Announcement of the use of Section 185 will create yet more uncertainty in the marine energy sector. A number of leading developers are seeking investment in the first arrays in the next few years. Investors require some certainty there will be a reasonable marine energy market post-2017 in order to commit considerable capital to pre-commercial projects in the short term. Uncertainty over transmission charging together with an incomplete picture over EMR make the investment case less compelling.

4. Conclusion

Aquamarine Power remains very concerned that the proposed charges for Scottish islands set out in Project TransmiT will severely jeopardise the UK’s position as a world leader in wave and tidal technologies.



We believe the proposed charging regime is discriminatory, inconsistent, contrary to EU directives and is pushing in the opposite direction to other UK and European renewables policy.

Whilst we understand the desire for a consistent methodology to be applied throughout the UK, we believe there are a number of solutions proposed for the Scottish islands which would be entirely consistent with Ofgem's responsibilities for fairness, consumer protection, quality and security of supply, and which would greatly enhance the potential for the UK to exceed its renewable energy targets.

What's more, a fair regime for the Scottish islands would not only enable the UK to meet its renewable energy aspirations in a fair and affordable way, but would incentivise the growth of a new marine energy sector which not only has the capacity to contribute to UK targets, but the potential to grow into a world-leading industrial sector which can impact on renewable energy targets around the globe.