

## **Orkney Islands Council Response to Ofgem's Impact Assessment – August 2013**

The Council is grateful for the opportunity to respond to this consultation document. Renewable energy resources from the wind, sea and tides constitute a significant concentration of potentially exploitable renewable energy resources in the UK and the region is well placed to contribute to UK and European carbon reduction and renewable electricity generation targets *if* key regulatory barriers can be effectively addressed to facilitate deployment of renewable technologies.

Orkney Islands Council has been working on issues associated with delivering effective Grid Infrastructure for Orkney. Considerable progress is being made in the commercialisation of marine renewable energy in Orkney with developers within the Pentland Firth and Orkney Waters progressing towards the consenting of first arrays. The Council remains concerned that the current procedure on how grid construction is triggered, underwritten, accessed and charged for in the Scottish islands remains a deterrent for investors.

### **Sharing**

We support the split between Peak and Year Round background elements for use in the Transport Model as it is more cost reflective than the Status Quo which relied on capacity based charging. Evidence supplied to the CMP213 Work Group and to the SCR which preceded it in the Project TransmiT exercise, demonstrated clearly that the simple capacity model did not adequately reflect the true use of the network for intermittent and non-baseload plant. The recent changes to the NETS SQSS (GSR-009) demonstrated a move away from network investment based solely on deterministic considerations and more on a cost benefit model where network sharing is implied. The initial assumption used, of 0% for intermittent generation for the Peak element in the model seems to be adequately justified.

We support the use of Diversity 1 in preference to Diversity 2 and 3, but we feel that Diversity 1 may need further refinement in future to better reflect possible sharing between intermittent generators within zones and across boundaries. The current assumption for Diversity 1 is that intermittent generation runs at the same time and that counter correlation can only occur when mixed with conventional (carbon) generation. The research undertaken by Heriot Watt demonstrates that counter-correlation between different renewables technologies is possible. It could offer efficiency savings to consumers.

We believe that the method proposed to calculate Annual Load Factor using 3 of the 5 past year's data strikes the right balance as methods using user prediction would require complex safeguards.

### **HVDC (Bootstraps and Island Links)**

We are disappointed that Ofgem seem to have discounted the evidence supplied through the Work Group report which supported the view that significant elements of HVDC links –

within the Converter Stations - are analogous with fixed (non-locational) elements of the AC network.

Since the Work Group report other evidence is emerging on how HVDC with VSC (Voltage Source Converters) can support the HVAC network by enabling greater flexibility and stability. In particular the ability to quickly change the direction of power flow can make it possible for intermittent (renewables) and thermal (carbon based) generation across boundaries to better service demand – when renewable energy sources drop, energy can be imported from thermal generation with fast response times. The bootstraps crossing multiple constraint boundaries with increasing amounts of generation from renewables in the north could readily allow faster response import of power from the south in times of lower availability of renewable energy with consequent reduction of constraint costs and energy losses.

Given the flexibility, stability and easy switch in direction of power flow afforded by HVDC technology it would surely be counter-productive to load all the costs onto generators triggering incorporation of this new technology into key parts of the UK NETS. There is a strong case for sharing some of the cost with demand. We would strongly urge Ofgem to revisit its minded to stance on HVDC converters and look again at the benefits to the wider Network, including demand and afford similar treatment in charging as fixed parts (non-locational) of the HVAC system.

### **Island Links**

The need to settle a charging structure within TNUoS for the Scottish Islands was a major plank of Project TransmiT both to unlock our islands' potential for renewable generation to assist in the decarbonisation of the UK generation mix and establish stability in use of system costs (where expansion factors had been previously undecided). The Council is extremely disappointed, that Ofgem's Impact Assessment, and 'minded to' proposals do little to mitigate high indicative charges to the Islands.

WACM2 offers little change from the Status Quo as far as, both, the (high) level of charging and the stability of the expansion factor – based on a project by project full cost for local subsea links (AC or HVDC). One perceived barrier to investment in new generation on the Islands was the disparity in TNUoS between the Islands and the nearest Mainland charging Zone. For Orkney the difference under Status Quo is estimated at (2020) £42.96/kW whilst for WACM (and also the Original and many other WACMS) the difference is increased by a further £5/kW to around £48/kW (figures drawn from CMP213 Code Administrator report - modelling). The other Scottish Islands (Shetland and Western Isles) are similarly affected without HVDC 50%.

Whilst the outlook for substantive TNUoS for Islands as single circuit radial links has changed relatively little under WACM2, we are pleased to support the Counter Correlation Factor (CCF) in the context of local sharing on radial circuits. We believe that it will significantly encourage and support sharing of local circuits with multiple users and make such circuits more cost effective to plan and build. The measure in the CUSC will require

cooperation between NGET and the SOs, the SOs and the users and user to user in order to become effective. It is likely to need some changes to BCAs also in relation to firmness of access.

### **Security Factor (Island Links)**

We support the introduction into the CUSC of a SF of 1.0 for local, single, radial circuits as it is cost reflective.

### **Implementation**

We strongly support early implementation of the move to a revised charging methodology, whether it is WACM2 or another, with an effective date of April 2014 in line with Ofgem's minded –to position. It is important that developers are given an early indication of the transmission costs they will face.

### **Conclusion**

Overall we support many of the aspects of WACM2 with the proviso that there is a strong case that HVDC converters, where they provide a similar function to HVAC infrastructure should be treated as non-locational.

We trust this submission is helpful, and we look forward to continue working with you to seeking solutions to unlocking the vast renewable energy resources in and around the Orkney Islands.